HUNTSMAN
Enriching lives through innovation

LANASET® BLACK B GR

Version	Revision Date:	SDS Number:
1.1	06/24/2015	400001006407

SECTION 1. IDENTIFICATION

Product name : LANASET® BLACK B GR

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Cust ser: (888) 514 4558

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Textile dyes, finishing and impregnating products; including bleaches and other processing aids

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

Skin sensitization : Category 1

Chronic aquatic toxicity : Category 2

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P280 Wear eye protection/ face protection.
Recommended:
Tightly fitting safety goggles
P273 Avoid release to the environment.
P261 Avoid breathing dust.
P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing must not be allowed out of the workplace.
Response:
P391 Collect spillage.
P302 IF ON SKIN:
P352 Wash with plenty of soap and water.
P362 Take off contaminated clothing and wash before reuse.
P305 IF IN EYES:
P337 If eye irritation persists:
P313 Get medical advice/ attention.
Storage:
P422 Store contents under inert gas.
Disposal:
ENVT12 Dispose of waste product or used containers according to local regulations.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Chromate(2-), [N-(2-chlorophenyl)-2-[2-[2-(hydroxy-.kappa.O)-5-nitrophenyl]diazenyl-.kappa.N1]-3-(oxo-.kappa.O)butanamidato(2-)][3-(	72403-66-8	>= 1 - <= 3
Chromate(2-), [1-[2-[2-(hydroxy-.kappa.O)-3,5-dinitrophenyl]diazenyl-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O][3-(hydroxy-.kappa.O)	70236-55-4	>= 30 - <= 60
Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(	57693-14-8	>= 30 - <= 60

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
If symptoms persist, call a physician.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes.
If skin irritation persists, call a physician.

In case of eye contact : In case of eye contact
Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.

If swallowed : If swallowed
Do not induce vomiting without medical advice.
If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Causes serious eye irritation.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : No data is available on the product itself.

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

No data is available on the product itself.

Specific extinguishing methods : No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	:	No hazardous decomposition products are known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Personal protective equipment

Respiratory protection	:	P1 filter
Hand protection		
Material	:	Neoprene gloves
Break through time	:	< 1 h
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	granules
Color	:	black
Odor	:	odorless
Odor Threshold	:	No data is available on the product itself.
pH	:	7.5 - 8.5, Concentration: 1 g/l (20 °C)
Flash point	:	No data is available on the product itself.
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	Fire will spread by smoldering or slow decomposition.
		Fire will spread by smoldering or slow decomposition.
Upper explosion limit	:	No data is available on the product itself.
Lower explosion limit	:	No data is available on the product itself.
Vapor pressure	:	No data is available on the product itself.
Relative vapor density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	0.69 g/cm3 (20 °C) Bulk density
Solubility(ies)		
Water solubility	:	>= 65 g/l (90 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Autoignition temperature	:	No data is available on the product itself.

Decomposition temperature	:	> 200 °C
Viscosity	:	No data is available on the product itself.
Oxidizing properties	:	None.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Impact sensitivity	:	Not impact sensitive.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	None known. Stable under normal conditions. No decomposition if stored and applied as directed. Dust may form explosive mixture in air.
Conditions to avoid	:	None. No data available
Hazardous decomposition products	:	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity - Product	:	Acute toxicity estimate: > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity - Product	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute toxicity (other routes of administration)	:	No data available

Skin corrosion/irritation

Product:

Species: Rabbit
Assessment: No skin irritation
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: Irritating to eyes.
Assessment: Irritant

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization

Product:

Routes of exposure: Skin
Species: Guinea pig
Assessment: May cause sensitization by skin contact.
Method: OECD Test Guideline 406
Result: Causes sensitization.

Remarks: Causes sensitization.

Assessment: No data available

Germ cell mutagenicity

Ingredients:

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: Not classified due to inconclusive data.

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Ingredients:

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Genotoxicity in vivo : Cell type: Somatic
Application Route: Intraperitoneal injection
Dose: 150 mg/kg
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

Reproductive toxicity

Effects on fertility : No data available

Ingredients:

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Effects on fetal development : Species: Rat, male and female
Application Route: Oral
General Toxicity Maternal: NOAEL (No observed adverse effect level): 1,000 mg/kg body weight
Method: OECD Test Guideline 422
Result: No teratogenic effects.

Reproductive toxicity - Assessment : No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Repeated dose toxicity

Ingredients:

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**
Species: Rat
NOAEL (No observed adverse effect level): 1000 mg/kg
Application Route: Ingestion
Exposure time: 672 h
Method: Subacute toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish - Product : LC50: 6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 203

Ingredients:

Chromate(2-), [N-(2-chlorophenyl)-2-[2-[2-(hydroxy-.kappa.O)-5-nitrophenyl]diazenyl-.kappa.N1]-3-(oxo-.kappa.O)butanamidato(2-)][3-(**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.3 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Chromate(2-), [1-[2-[2-(hydroxy-.kappa.O)-3,5-dinitrophenyl]diazenyl-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O][3-(hydroxy-.kappa.O)**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 79 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Ingredients:

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Toxicity to algae : ErC50: 103 mg/l
Exposure time: 168 h
Test Type: static test

		Test substance: Fresh water Method: OECD Test Guideline 221
M-Factor (Acute aquatic toxicity)	:	No data available
Toxicity to fish (Chronic toxicity)	:	No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	No data available
M-Factor (Chronic aquatic toxicity)	:	No data available
Toxicity to bacteria - Product	:	IC50: > 300 mg/l Exposure time: 3 h
Toxicity to soil dwelling organisms	:	No data available
Plant toxicity	:	No data available
Sediment toxicity	:	No data available
Toxicity to terrestrial organisms	:	No data available
Ecotoxicology Assessment Acute aquatic toxicity	:	No data available
Chronic aquatic toxicity	:	No data available
Toxicity Data on Soil	:	No data available
Other organisms relevant to the environment	:	No data available

Further information:
No data available

Persistence and degradability

Biodegradability - Product	:	Biodegradation: ca. 40 % Exposure time: 28 d Method: OECD Test Guideline 302B
Biochemical Oxygen Demand (BOD) - Product	:	0 mgO2/g
Chemical Oxygen Demand (COD) - Product	:	950 mgO2/g
BOD/COD	:	No data available
ThOD	:	No data available

BOD/ThOD	:	No data available
Dissolved organic carbon (DOC)	:	No data available
Physico-chemical removability	:	No data available
Stability in water	:	No data available
Photodegradation	:	No data available
Impact on Sewage Treatment	:	No data available

Bioaccumulative potential

Bioaccumulation	:	No data available

Ingredients:

Chromate(2-), [N-(2-chlorophenyl)-2-[2-[2-(hydroxy-.kappa.O)-5-nitrophenyl]diazenyl-.kappa.N1]-3-(oxo-.kappa.O)butanamidato(2-)][3-(**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Chromate(2-), [1-[2-[2-(hydroxy-.kappa.O)-3,5-dinitrophenyl]diazenyl-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O][3-(hydroxy-.kappa.O)**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(**:**

Partition coefficient: n-octanol/water	:	log Pow: -1.74 (20 °C)

Mobility in soil

Mobility	:	No data available
Distribution among environmental compartments	:	No data available
Stability in soil	:	No data available

Other adverse effects

Environmental fate and pathways	:	No data available
Results of PBT and vPvB assessment	:	No data available
Endocrine disrupting potential	:	No data available
Adsorbed organic bound	:	.1 %

halogens (AOX) - Product		Test substance: Chlorine

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information - Product	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
Global warming potential (GWP)	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (CHROMIUM COMPLEX MONOAZO DYESTUFF)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956

IMDG

UN number	:	UN 3077

Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CHROMIUM COMPLEX MONOAZO DYESTUFF)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

DOT Classification

UN/ID/NA number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (CHROMIUM COMPLEX MONOAZO DYESTUFF)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

SARA 311/312 Hazards : Acute Health Hazard
Acute Health Hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Chromate(2-), [1-[2-[2-(hydroxy-.kappa.O)-3,5-dinitrophenyl]diazenyl-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O][3-(hydroxy-.kappa.O)	70236-55-4	32.215 %

Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(	57693-14-8	31.58 %
Chromate(2-), [N-(2-chlorophenyl)-2-[2-[2-(hydroxy-.kappa.O)-5-nitrophenyl]diazenyl-.kappa.N1]-3-(oxo-.kappa.O)butanamidato(2-)][3-(	72403-66-8	2.05 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Pennsylvania Right To Know

Chromate(2-), [1-[2-[2-(hydroxy-.kappa.O)-3,5-dinitrophenyl]diazenyl-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O][3-(hydroxy-.kappa.O)	70236-55-4	30 - 50 %
Chromate(3-), bis[3-(hydroxy-.kappa.O)-4-[2-[2-(hydroxy-.kappa.O)-1-naphthalenyl]diazenyl-.kappa.N1]-7-nitro-1-naphthalenesulfonato(	57693-14-8	30 - 50 %
Sulfuric acid sodium salt (1:2)	7757-82-6	20 - 30 %

California Prop 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

TSCA	:	On the inventory, or in compliance with the inventory
DSL	:	On the inventory, or in compliance with the inventory
AICS	:	On the inventory, or in compliance with the inventory
ENCS	:	Not in compliance with the inventory
	:	LANASET® BLACK B BPG
ISHL	:	Not in compliance with the inventory
	:	LANASET® BLACK B BPG
KECI	:	Not in compliance with the inventory
	:	LANASET® BLACK B BPG
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

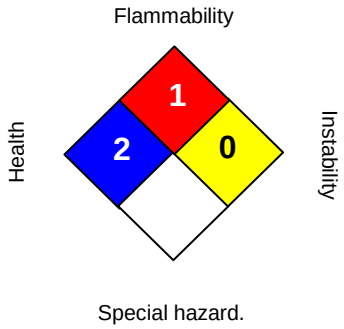
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Revision Date : 06/24/2015

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

LANASET® BROWN B

Version	Revision Date:	SDS Number:	Date of last issue: 08/12/2015
1.1	08/14/2015	400001005639	Date of first issue: 08/12/2015

SECTION 1. IDENTIFICATION

Product name : LANASET® BROWN B

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Cust ser: (888) 514 4558

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Textile dyes, finishing and impregnating products; including bleaches and other processing aids

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

Chronic aquatic toxicity : Category 2

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
paraffin oils	8012-95-1	>= 1 - <= 3
disodium [2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-hydroxy-4-[(2-hydroxy-1-naphthyl)	70236-60-1	>= 30 - <= 60
disodium [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4-hydroxybenzenesulphonato(3-)][1-[[2-hydroxy-5-(phenylazo)ph	52587-68-5	>= 13 - <= 30

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If inhaled
Move to fresh air.
Keep respiratory tract clear.
If symptoms persist, call a physician.

In case of skin contact : In case of skin contact
Wash off with soap and plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.

In case of eye contact : In case of eye contact
Flush eyes with water as a precaution.
Remove contact lenses.
If eye irritation persists, consult a specialist.

If swallowed : If swallowed
Do not induce vomiting without medical advice.
If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Most important symptoms and effects, both acute and : May cause an allergic skin reaction.

delayed

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	No data is available on the product itself. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known No data is available on the product itself.
Specific extinguishing methods	:	No data is available on the product itself.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles.

Do not breathe vapors/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No hazardous decomposition products are known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
paraffin oils	8012-95-1	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Material : Gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles.

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	granules
Color	:	black
Odor	:	odorless
Odor Threshold	:	No data is available on the product itself.
pH	:	9 - 10, Concentration: 20 g/l
Flash point	:	No data is available on the product itself.
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	Product resists ignition and does not promote flame spread.
		Product resists ignition and does not promote flame spread.
Upper explosion limit	:	No data is available on the product itself.
Lower explosion limit	:	No data is available on the product itself.
Vapor pressure	:	No data is available on the product itself.
Relative vapor density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	0.98 g/cm3 Bulk density
Solubility(ies)		
Water solubility	:	100 g/l (30 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Autoignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	> 200 °C
Viscosity	:	No data is available on the product itself.
Oxidizing properties	:	None.
Self-Accelerating	:	No data is available on the product itself.

decomposition temperature (SADT)
Impact sensitivity : Not impact sensitive.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous reactions : Do not mix with reducing agents.
Stable under normal conditions.

No decomposition if stored and applied as directed.

Dust may form explosive mixture in air.

Conditions to avoid : None.

No data available

Hazardous decomposition products : Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat): > 5,000 mg/kg

Ingredients:

paraffin oils**:**
Acute inhalation toxicity : LC50 (Rat): 2,062 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : No data available

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Product:

Species: Rabbit
Assessment: No skin irritation
Result: No skin irritation

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: No eye irritation
Assessment: No eye irritation

Remarks: Product dust may be irritating to eyes, skin and respiratory system.

Respiratory or skin sensitization

Product:

Routes of exposure: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Causes sensitization.

Remarks: Causes sensitization.

Assessment: No data available

Germ cell mutagenicity

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

IARC	Group 1: Carcinogenic to humans
	paraffin oils
ACGIH	Suspected human carcinogen
	paraffin oils
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	Known to be human carcinogen
	paraffin oils

Reproductive toxicity

Effects on fertility : No data available

Effects on fetal development : No data available

Reproductive toxicity - : No data available

Assessment

STOT-single exposure
No data available

STOT-repeated exposure
No data available

Repeated dose toxicity
No data available

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity
No data available

Experience with human exposure
General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information
Product:
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish - Product : LC50: 5 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Ingredients:

disodium [2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-hydroxy-4-[(2-hydroxy-1-naphthyl)**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: no

disodium [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4-hydroxybenzenesulphonato(3-)][1-[[2-hydroxy-5-(phenylazo)ph**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 15.6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : No data available

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : No data available

M-Factor (Chronic aquatic toxicity) : No data available

Toxicity to bacteria - Product : IC50: > 300 mg/l
Exposure time: 3 h

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Further information:
No data available

Persistence and degradability

Biodegradability - Product	:	Biodegradation: 10 - 20 % Exposure time: 28 d Method: OECD Test Guideline 302B
Biochemical Oxygen Demand (BOD) - Product	:	15 mgO2/g
Chemical Oxygen Demand (COD) - Product	:	1120 mgO2/g
BOD/COD	:	No data available
ThOD	:	No data available
BOD/ThOD	:	No data available
Dissolved organic carbon (DOC)	:	No data available
Physico-chemical removability	:	No data available
Stability in water	:	No data available
Photodegradation	:	No data available
Impact on Sewage Treatment	:	No data available

Bioaccumulative potential

Bioaccumulation	:	No data available

Ingredients:

disodium [2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-hydroxy-4-[(2-hydroxy-1-naphthyl)**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3

disodium [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4-hydroxybenzenesulphonato(3-)][1-[[2-hydroxy-5-(phenylazo)ph**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Mobility in soil

Mobility	:	No data available
Distribution among environmental compartments	:	No data available
Stability in soil	:	No data available

Other adverse effects

Environmental fate and pathways	:	No data available
Results of PBT and vPvB assessment	:	No data available
Endocrine disrupting potential	:	No data available
Adsorbed organic bound halogens (AOX) - Product	:	0 %

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information - Product	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
Global warming potential (GWP)	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (MONOAZO METAL COMPLEX DYESTUFF)
Class	:	9

Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956

IMDG

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MONOAZO METAL COMPLEX DYESTUFF)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

DOT Classification

UN/ID/NA number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (MONOAZO METAL COMPLEX DYESTUFF)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM HEXAMETAPHOSPHATE	10124-56-8	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Chronic Health Hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

disodium [2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-hydroxy-4-[(2-hydroxy-1-naphthyl)	70236-60-1	34.6281 %
disodium [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4-hydroxybenzenesulphonato(3-)][1-[[2-hydroxy-5-(phenylazo)ph	52587-68-5	23.9115 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7

The ingredients of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory
DSL : On the inventory, or in compliance with the inventory

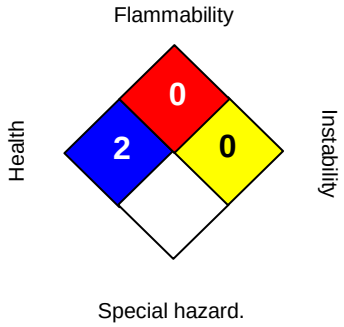
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Revision Date : 08/14/2015

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® GREEN B

Section 1. Identification

GHS product identifier : **LANASET® GREEN B**

Product code : 00041695

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Textile dye

Uses advised against	**Reason**
Not available.	-

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Very toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements : Avoid release to the environment. Collect spillage. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Disodium [(9,10-dihydro-9,10-dioxo-1,4-anthrylene)bis(imino-4, 1-phenyleneoxy)]bis(benzenesulfonate)	60 - 100	70161-19-2
PARAFFIN OILS	1 - 3	8012-95-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
PARAFFIN OILS	**ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P1

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Navy blue

Odor : Odorless.

Odor threshold : Not applicable.

pH : 9 to 9.5 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 30 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : 200°C (392°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 420 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	-	LD50 Oral	Rat	>5000 mg/kg
PARAFFIN OILS	-	LC50 Inhalation Dusts and mists	Rat	2062 mg/l
	-	LD50 Oral	Rat	22000 mg/kg
LANASET GREEN B	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Conclusion/Summary

Skin : Non-irritant. Rabbit

Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)] bis(benzenesulfonate)	No additional information.
PARAFFIN OILS	No additional information.

Eyes : Non-irritant. Rabbit

Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)] bis(benzenesulfonate)	No additional information.
PARAFFIN OILS	No additional information.

Respiratory :

Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)] bis(benzenesulfonate)	No additional information.
PARAFFIN OILS	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
LANASET GREEN B	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Section 11. Toxicological information

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	OECD 201 Alga, Growth Inhibition Test	Acute	EC50	72 hours	Algae	9.6	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>34	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	0.6	mg/l
PARAFFIN OILS	Unknown guidelines Not known	Acute	LC0	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC100	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC50	96 hours	Fish	>1000	mg/l
LANASET GREEN B	OECD 201 Alga, Growth Inhibition Test	Acute	EC50	72 hours	Algae	9.6	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>34	mg/l
	-	Acute	IC50	3 hours	Bacteria	>300	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC0	48 hours	Fish	0.2	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	0.6	mg/l

Conclusion/Summary : Very toxic to aquatic organisms if run directly to surface waters

Persistence and degradability

Product/ingredient name	Test	Period	Result
Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	28 days	10 to 20 %
LANASET GREEN B	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	28 days	10 to 20 %

Conclusion/Summary : Poorly eliminated by adsorption on effluent treatment sludge.

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET GREEN B Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	- -	- -	Not readily Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Disodium [(9,10-dihydro-9, 10-dioxo-1,4-anthrylene)bis (imino-4,1-phenyleneoxy)]bis (benzenesulfonate)	<3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	:	0	mgO2/g
COD	:	1270	mgO2/g
TOC	:	43	%
Organohalogen content	:	0	%
Phosphorus Content	:	0	%
Nitrogen Content	:	3.4	%
Metal Content	:	Metal content under the ETAD recommended limits.	

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

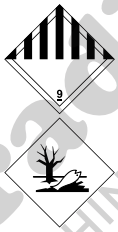
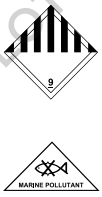
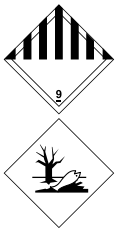
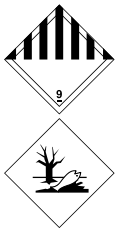
Proper shipping name

DOT : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF). Marine pollutant

TDG : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF). Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF). Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF)

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3077	9	III		- Only regulated in Bulk.
TDG Classification	UN3077	9	III		-
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A, S-F
IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Not classified.

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 : No ingredients listed.

CERCLA Hazardous substances : No ingredients listed.

State regulations

PENNSYLVANIA - RTK : Sodium sulfate, Mixture of hydrocarbons ex petroleum

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	1
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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SAFETY DATA SHEET

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Enriching lives through innovation

LANASET® GREY G GR

Section 1. Identification

GHS product identifier : **LANASET® GREY G GR**

Product code : 00041728

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements : Wear protective gloves: < 1 hour (breakthrough time): butyl or neoprene. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Chromium as Cr(III) organo-metal complex	13 - 30	84145-95-9
Cobalt as organo-metal complex	13 - 30	75314-27-1
Chromium as Cr(III) organo-metal complex	7 - 13	68541-71-9
Chromium as Cr(III) organo-metal complex	1 - 3	51147-75-2
Chromium as Cr(III) organo-metal complex	1 - 3	64611-73-0
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	1 - 3	36290-04-7
PARAFFIN OILS	1 - 3	8012-95-1
Cobalt as organo-metal complex	0.1 - 1	70851-34-2, 73612-41-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours.
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours.
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours.
PARAFFIN OILS	**ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Black.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 7.5 to 8 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Non-flammable.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 80 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >200°C (>392°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 500 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.6 to 0.7 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

VOC : 2.1 % (w/w)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Section 10. Stability and reactivity

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Cobalt as organo-metal complex	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>2000 mg/kg
Chromium as Cr(III) organo-metal complex	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>2000 mg/kg
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	>2000 mg/kg
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	LD50 Oral	Mouse	4880 mg/kg
PARAFFIN OILS	-	LC50 Inhalation Dusts and mists	Rat	2062 mg/l
	-	LD50 Oral	Rat	22000 mg/kg
Cobalt as organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	3900 mg/kg
LANASET GREY G GR	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
LANASET GREY G GR	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
	-	Rabbit	Eyes - Non-irritant.

Conclusion/Summary

Skin : Non-irritating to the skin.

Chromium as Cr(III) organo-metal complex	No additional information.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.

Section 11. Toxicological information

	PARAFFIN OILS	No additional information.
	Cobalt as organo-metal complex	No additional information.

Eyes : Non-irritating to the eyes.

Chromium as Cr(III) organo-metal complex	No additional information.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.
PARAFFIN OILS	No additional information.
Cobalt as organo-metal complex	No additional information.

Respiratory :

Chromium as Cr(III) organo-metal complex	No additional information.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.
PARAFFIN OILS	No additional information.
Cobalt as organo-metal complex	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Chromium as Cr(III) organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Cobalt as organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Chromium as Cr(III) organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
Cobalt as organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
LANASET GREY G GR	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Result
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	Subject: bacteria/yeast	Negative

Carcinogenicity

Not available.

Carcinogenic class

Product/ingredient name	IARC	OSHA
Chromium as Cr(III) organo-metal complex	3	-
Chromium as Cr(III) organo-metal complex	3	-
Chromium as Cr(III) organo-metal complex	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Chromium as Cr(III) organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>100	mg/l
	-	Acute	IC50	3 hours	Bacteria	>300	mg/l
	-	Acute	LC50	48 hours	Fish	7	mg/l
Cobalt as organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>131	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	-	Acute	LC50	48 hours	Fish	58	mg/l
Chromium as Cr(III) organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	146	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	NOEC	48 hours	Daphnia	39	mg/l

Section 12. Ecological information

Chromium as Cr(III) organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	<0.6	mg/l
	Unknown guidelines Not known	Acute	IC50	3 hours	Bacteria	>300	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	>100	mg/l
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	Acute	EC50	48 hours	Daphnia	37	mg/l
	No official guidelines	Acute	EC50	48 hours	Daphnia	9.9 to 15	mg/l
	OECD OECD 202 screening	Acute	EC50	48 hours	Daphnia	39	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>1000	mg/l
PARAFFIN OILS	Unknown guidelines Not known	Acute	LC0	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC100	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC50	96 hours	Fish	>1000	mg/l
Cobalt as organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	30.5	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	0.52	mg/l
LANASET GREY G GR	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	1 to 10	mg/l
	-	Acute	IC50	3 hours	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	18	mg/l

Conclusion/Summary : Toxic to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Chromium as Cr(III) organo-metal complex	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	28 days	0 %
Cobalt as organo-metal complex	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	21 days	0 %
Chromium as Cr(III) organo-metal complex	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	22.9 %
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	28 days	<60 %
	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	28 days	<5 %
Cobalt as organo-metal complex	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0.3 %
LANASET GREY G GR	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	70 to 80 %

Section 12. Ecological information

Conclusion/Summary : Eliminated by adsorption onto effluent treatment sludge.

Chromium as Cr(III) organo-metal complex — Partially eliminated by adsorption onto effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET GREY G GR	-	-	Not readily
Chromium as Cr(III) organo-metal complex	-	-	Not readily
Cobalt as organo-metal complex	-	-	Not readily
Chromium as Cr(III) organo-metal complex	-	-	Not readily
2-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	-	-	Not readily
Cobalt as organo-metal complex	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Chromium as Cr(III) organo-metal complex	<3	-	low
Chromium as Cr(III) organo-metal complex	<3	-	low
Chromium as Cr(III) organo-metal complex	<3	-	low
Cobalt as organo-metal complex	<3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 25	mgO2/g	
COD	: 1000	mgO2/g	
TOC	: 34.4	%	
Organohalogen content	: 0.28	%	Chloro
Phosphorus Content	: < 0.1	%	as phosphate
Nitrogen Content	: 5.7	%	
Metal Content	: 0.79	%	Cobalt as organo-metal complex
	: 2.5	%	Chromium as Cr(III) organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

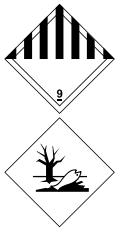
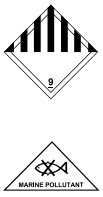
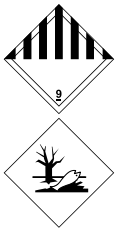
Proper shipping name

DOT : Environmentally hazardous substance, solid, n.o.s. (METAL COMPLEX DYESTUFF). Marine pollutant

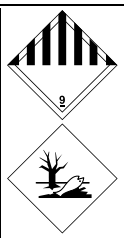
TDG : Environmentally hazardous substance, solid, n.o.s. (METAL COMPLEX DYESTUFF). Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. (METAL COMPLEX DYESTUFF). Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (METAL COMPLEX DYESTUFF)

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3077	9	III		- Marine Pollutant Only regulated in Bulk.
TDG Classification	UN3077	9	III		Only regulated in Bulk. Marine pollutant
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A, S-F

Section 14. Transport information

IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	19.556
Cobalt as organo-metal complex	17.347
Chromium as Cr(III) organo-metal complex	12.277
Chromium as Cr(III) organo-metal complex	2.9755
Chromium as Cr(III) organo-metal complex	1.5346
Chromium as Cr(III) organo-metal complex	1.5346

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	19.556
Cobalt as organo-metal complex	17.347
Chromium as Cr(III) organo-metal complex	12.277
Chromium as Cr(III) organo-metal complex	2.9755
Chromium as Cr(III) organo-metal complex	1.5346
Chromium as Cr(III) organo-metal complex	1.5346

Section 15. Regulatory information

	Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
CERCLA Hazardous substances :	Chromium as Cr(III) organo-metal complex	19.5564	Listed	No RQ assigned	
	Cobalt as organo-metal complex	17.34717	Listed	No RQ assigned	
	Chromium as Cr(III) organo-metal complex	12.27672	Listed	No RQ assigned	
	Chromium as Cr(III) organo-metal complex	2.9755	Listed	No RQ assigned	
	Chromium as Cr(III) organo-metal complex	1.53459	Listed	No RQ assigned	
	Chromium as Cr(III) organo-metal complex	1.53459	Listed	No RQ assigned	
	Cobalt as organo-metal complex	0.3009	Listed		
	Cobalt as organo-metal complex	0.09439	Listed	No RQ assigned	

State regulations

PENNSYLVANIA - RTK : Chromium as Cr(III) organo-metal complex, Chromium as Cr(III) organo-metal complex, Chromium as Cr(III) organo-metal complex, Chromium as Cr(III) organo-metal complex, Cobalt as organo-metal complex, Chromium as Cr(III) organo-metal complex, Sodium sulfate, PARAFFIN OILS

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): At least one component is not listed.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

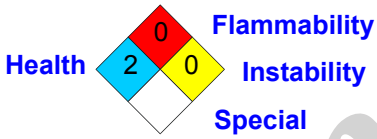
Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Date of printing : **1/2/2014.**

Date of issue : 1/2/2014.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

LANASET® NAVY R

Version	Revision Date:	SDS Number:	Date of last issue: 07/21/2015
1.2	09/29/2015	400001005644	Date of first issue: 07/10/2015

SECTION 1. IDENTIFICATION

Product name : LANASET® NAVY R

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Cust ser: (888) 514 4558

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Textile dyes, finishing and impregnating products; including bleaches and other processing aids

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)	68541-71-9	13 - 30
paraffin oils	8012-95-1	1 - 3
sodium 1-amino-4-[[3,5-bis[[(chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxoanthracene-2-sulphonate	80010-51-1	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
Keep respiratory tract clear.
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
If symptoms persist, call a physician.
Take off contaminated clothing and shoes immediately.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.
If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known
Specific extinguishing methods	:	No data is available on the product itself.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma,

allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Material : Neoprene gloves
Break through time : < 1 h

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles.

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granules

Color : dark blue

Odor : odorless

Odor Threshold : No data is available on the product itself.

pH : 7.5 - 8, Concentration: 20 g/l

Flash point : No data is available on the product itself.

Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	Fire will spread by smoldering or slow decomposition. Fire will spread by smoldering or slow decomposition.
Upper explosion limit	:	No data is available on the product itself.
Lower explosion limit	:	No data is available on the product itself.
Vapor pressure	:	No data is available on the product itself.
Relative vapor density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	0.47 g/cm3 Bulk density
Solubility(ies) Water solubility	:	100 g/l (30 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Autoignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	> 240 °C
Viscosity	:	No data is available on the product itself.
Oxidizing properties	:	None.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Dust may form explosive mixture in air. Stable under normal conditions.
Conditions to avoid	:	Avoid dust formation.
Hazardous decomposition products	:	None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of	:	No data is available on the product itself.

exposure

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat): 4,770 mg/kg

Ingredients:

paraffin oils**:**

Acute inhalation toxicity : LC50 (Rat): 2,062 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : No data available

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Remarks: Product dust may be irritating to eyes, skin and respiratory system.

Respiratory or skin sensitization

Product:

Routes of exposure: Skin
Species: Guinea pig
Assessment: May cause sensitization by skin contact.
Method: OECD Test Guideline 406
Result: Causes sensitization.

Remarks: Causes sensitization.

Assessment: No data available

Germ cell mutagenicity

Ingredients:

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)**:**

Genotoxicity in vitro : Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment	:	No data available
IARC		Group 1: Carcinogenic to humans paraffin oils
ACGIH		Suspected human carcinogen paraffin oils
OSHA		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP		Known to be human carcinogen paraffin oils

Reproductive toxicity

Effects on fertility	:	No data available
Effects on fetal development	:	No data available
Reproductive toxicity - Assessment	:	No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Repeated dose toxicity

No data available

Repeated dose toxicity - Assessment	:	No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information:	No data available
Inhalation:	No data available
Skin contact:	No data available
Eye contact:	No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish - Product : LC50: 17 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 203

Ingredients:

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 146 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

NOEC (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

sodium 1-amino-4-[[3,5-bis[[(chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxoanthracene-2-sulphonate**:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : No data available

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Toxicity to daphnia and other : No data available

aquatic invertebrates (Chronic toxicity)		
M-Factor (Chronic aquatic toxicity)	:	No data available
Toxicity to bacteria - Product	:	IC50: > 300 mg/l Exposure time: 3 h
Toxicity to soil dwelling organisms	:	No data available
Plant toxicity	:	No data available
Sediment toxicity	:	No data available
Toxicity to terrestrial organisms	:	No data available
Ecotoxicology Assessment Acute aquatic toxicity	:	No data available
Chronic aquatic toxicity	:	No data available
Toxicity Data on Soil	:	No data available
Other organisms relevant to the environment	:	No data available

Further information:
No data available

Persistence and degradability

Biodegradability - Product	:	Result: Not readily biodegradable. Biodegradation: 50 - 60 % Exposure time: 28 d Method: OECD Test Guideline 302B
Biochemical Oxygen Demand (BOD) - Product	:	0 mgO2/g
Chemical Oxygen Demand (COD) - Product	:	530 mgO2/g
BOD/COD	:	No data available
ThOD	:	No data available
BOD/ThOD	:	No data available
Dissolved organic carbon (DOC)	:	No data available
Physico-chemical removability	:	No data available
Stability in water	:	No data available

Photodegradation	:	No data available
Impact on Sewage Treatment	:	No data available

Bioaccumulative potential

Bioaccumulation	:	No data available

Ingredients:

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3

sodium 1-amino-4-[[3,5-bis[[(chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxoanthracene-2-sulphonate**:**

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Mobility in soil

Mobility	:	No data available
Distribution among environmental compartments	:	No data available
Stability in soil	:	No data available

Other adverse effects

Environmental fate and pathways	:	No data available
Results of PBT and vPvB assessment	:	No data available
Endocrine disrupting potential	:	No data available
Adsorbed organic bound halogens (AOX) - Product	:	< .1 % Test substance: Chlorine

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information - Product	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA
Not regulated as a dangerous good

IMDG
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

DOT Classification
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know

SARA 311/312 Hazards : Acute Health Hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)	68541-71-9	18.3024 %
sodium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-)	64611-73-0	2.2878 %
trisodium bis[4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)]chromate(3-)	68541-70-8	2.2878 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

TSCA	:	On the inventory, or in compliance with the inventory
DSL	:	This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.
	:	LANASET® BLUE 2R
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

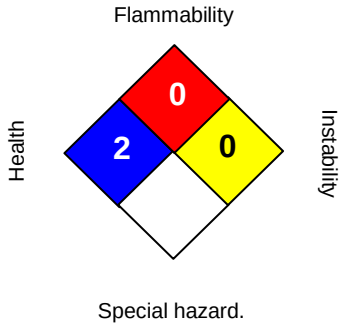
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Revision Date : 09/29/2015

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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SAFETY DATA SHEET

LANASET® ORANGE RN

HUNTSMAN
Enriching lives through innovation

Section 1. Identification

GHS product identifier : **LANASET® ORANGE RN**

Product code : 00041906

Other means of identification : Not available.

Product type : Solid.

Material uses : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Very toxic to aquatic life with long lasting effects.

Precautionary statements : Wear protective gloves: < 1 hour (breakthrough time): butyl or neoprene. In case of inadequate ventilation wear respiratory protection: Recommended: Respiratory protection, filter P3. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Dispose of contents and container in accordance with all

Section 2. Hazards identification

local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Chromate(2-) ,[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium	13 - 30	56819-40-0
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl)amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2,5-dichlorobenzenesulfonate	3 - 7	70247-70-0
white mineral oil	1 - 3	8042-47-5
PARAFFIN OILS	1 - 3	8012-95-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities :

Section 7. Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Chromate(2-) ,[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium PARAFFIN OILS	**OSHA PEL (United States, 2/2013).** TWA: 0.5 mg/m³, (as Cr) 8 hours. **ACGIH TLV (United States, 6/2013).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection :

Section 8. Exposure controls/personal protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P3

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Brown.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 6 to 6.5 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 80 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >200°C (>392°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 280 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.8 to 0.9 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
PARAFFIN OILS	-	LC50 Inhalation Dusts and mists	Rat	2062 mg/l
	-	LD50 Oral	Rat	22000 mg/kg
LANASET ORANGE RN	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
LANASET ORANGE RN	-	Rabbit	Eyes - Non-irritant.
	-	Rabbit	Skin - Non-irritant.

Conclusion/Summary

Skin : Non-irritating to the skin.

Chromate(2-) ,[2, 4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato (3-)]-, disodium	No additional information.
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
white mineral oil	No additional information.
PARAFFIN OILS	No additional information.

Eyes : Non-irritating to the eyes.

Section 11. Toxicological information

	Chromate(2-) ,[2, 4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato (3-)]-, disodium	No additional information.
	Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
	white mineral oil	No additional information.
	PARAFFIN OILS	No additional information.
Respiratory :	Chromate(2-) ,[2, 4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato (3-)]-, disodium	No additional information.
	Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
	white mineral oil	No additional information.
	PARAFFIN OILS	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
LANASET ORANGE RN	-	skin	Guinea pig	Sensitizing

Conclusion/Summary

Respiratory : This dyestuff contains C.I. Reactive Yellow 39 for which cases of respiratory sensitisation have been observed. Care should be taken to avoid inhalation. Consult a physician immediately if symptoms such as shortness of breath or asthma are observed. Should an individual become sensitized a physician should be consulted and all contact with reactive dyes must cease immediately.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Carcinogenic class

Product/ingredient name	IARC	OSHA
Chromate(2-) ,[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
white mineral oil	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>189	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
PARAFFIN OILS	Unknown guidelines Not known	Acute	LC0	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC100	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC50	96 hours	Fish	>1000	mg/l
LANASET ORANGE RN	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	30	mg/l
	-	Acute	IC50	3 hours	Bacteria	>400	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	<1	mg/l

Conclusion/Summary : Very toxic to aquatic organisms if run directly to surface waters

Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Period	Result
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0 %
LANASET ORANGE RN	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	30 to 40 %

Conclusion/Summary : Partially eliminated by adsorption onto effluent treatment sludge.

Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate — Poorly eliminated by adsorption on effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET ORANGE RN	-	-	Not readily
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	-3.3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 105	mgO2/g	
COD	: 685	mgO2/g	
TOC	: 26.2	%	
Organohalogen content	: 0.2	%	Chloro
Phosphorus Content	: 0	%	
Nitrogen Content	: 6.7	%	
Metal Content	: 1	%	Chromium as Cr(III) organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

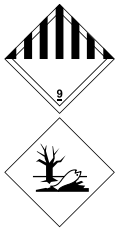
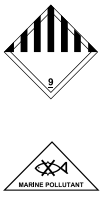
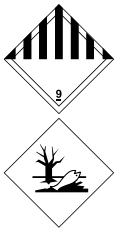
Proper shipping name

DOT : Environmentally hazardous substance, solid, n.o.s. (AZO DYESTUFF). Marine pollutant

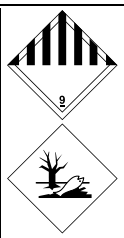
TDG : Environmentally hazardous substance, solid, n.o.s. (AZO DYESTUFF). Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. (AZO DYESTUFF). Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (AZO DYESTUFF)

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3077	9	III		-
TDG Classification	UN3077	9	III		-
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A, S-F

Section 14. Transport information

IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Chromate(2-) ,[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)] [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium	24.99

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
Chromate(2-) ,[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)] [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium	24.99

Section 15. Regulatory information

	Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
CERCLA Hazardous substances :	Chromate(2-) ,[2, 4-dihydro-4-[(2-hydroxy-5-nitrophenyl) azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)][3-[(4, 5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl) azo]-2-hydroxy-5-nitrobenzenesulfonato (3-)]-, disodium	24.99	Listed	No RQ assigned	

State regulations

PENNSYLVANIA - RTK : LANACRON ORANGE S-2R CRUDE MILLED, Mixture of hydrocarbons ex petroleum

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

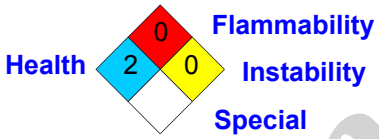
Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		0
Physical hazards		0
Personal protection		X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Indicates information that has changed from previously issued version.

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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SAFETY DATA SHEET

LANASET® RED G GR

Section 1. Identification

GHS product identifier : **LANASET® RED G GR**

Product code : 00043634

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Signal word : No signal word.

Hazard statements : Harmful to aquatic life with long lasting effects.

Precautionary statements : Avoid release to the environment. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Chromium as Cr(III) organo-metal complex	30 - 60	70209-87-9
Chromium as Cr(III) organo-metal complex	3 - 7	67109-27-7
Formaldehyde reaction products with sulfonated diphenylether derivative, Na salt	1 - 3	90387-57-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Section 4. First aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.005 mg/m³, (as Cr) 8 hours.
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: Tightly fitting safety goggles

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Red.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 7 to 8 [Conc. (% w/w): 0.1%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 60 g/l 30 deg C

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >180°C (>356°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 480 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.466 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	1720 mg/kg
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	>5000 mg/kg
LANASET RED G GR	-	LD50 Oral	Rat	>2000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	Rabbit	Eyes - Irritant
	Unknown guidelines Not known	Rabbit	Skin - Non-irritant.

Conclusion/Summary

Skin : Non-irritant. OECD 404 Rabbit

Section 11. Toxicological information

	Chromium as Cr(III) organo-metal complex	Non-irritating to the skin.
	Chromium as Cr(III) organo-metal complex	No additional information.
	Formaldehyde reaction products with sulfonated diphenylether derivative, Na salt	No additional information.

Eyes : Non-irritant. OECD 405 Rabbit

Chromium as Cr(III) organo-metal complex	Irritating to eyes.
Chromium as Cr(III) organo-metal complex	No additional information.
Formaldehyde reaction products with sulfonated diphenylether derivative, Na salt	No additional information.

Respiratory :

Chromium as Cr(III) organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
Formaldehyde reaction products with sulfonated diphenylether derivative, Na salt	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Chromium as Cr(III) organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Chromium as Cr(III) organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
LANASET RED G GR	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

Carcinogenic class

Product/ingredient name	IARC	OSHA
Chromium as Cr(III) organo-metal complex	1	+
Chromium as Cr(III) organo-metal complex	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 11. Toxicological information

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Chromium as Cr(III) organo-metal complex	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	130	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	14	mg/l
Chromium as Cr(III) organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	75.3	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
Formaldehyde reaction products with sulfonated diphenylether derivative, Na salt	OECD 201 Alga, Growth Inhibition Test	Acute	EC50	72 hours	Algae	17	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>100	mg/l
LANASET RED G GR	-	Acute	LC50	96 hours	Fish	>100	mg/l
	-	Acute	IC50	3 hours	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC0	96 hours	Fish	10	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	35	mg/l

Conclusion/Summary : Harmful to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Chromium as Cr(III) organo-metal complex	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	82 %
LANASET RED G GR	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	72 %

Conclusion/Summary : Eliminated by adsorption onto effluent treatment sludge.

Chromium as Cr(III) organo-metal complex — Eliminated by adsorption onto effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET RED G GR	-	-	Not readily
Chromium as Cr(III) organo-metal complex	-	-	Not readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Chromium as Cr(III) organo-metal complex	<3	-	low
Chromium as Cr(III) organo-metal complex	5.06	-	high

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 30	mgO2/g	
COD	: 665	mgO2/g	
TOC	: 21.5	%	
Organohalogen content	: 0.4	%	Chloro
Phosphorus Content	: 0	%	
Nitrogen Content	: 7.7	%	
Metal Content	: 3	%	Chromium as Cr(III) organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Section 14. Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Classification	Not regulated.	-	-		-
IATA Classification	Not regulated.	-	-		-

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Not classified.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	37.138
Chromium as Cr(III) organo-metal complex	6.567

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	37.138
Chromium as Cr(III) organo-metal complex	6.567

CERCLA Hazardous substances :

Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)

Section 15. Regulatory information

Chromium as Cr(III) organo-metal complex	37.1379	Listed	No RQ assigned	
Chromium as Cr(III) organo-metal complex	6.567	Listed	No RQ assigned	
Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate	1.4103	Listed	5000	354534

State regulations

PENNSYLVANIA - RTK : Chromium as Cr(III) organo-metal complex, Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate, Sodium sulfate, Chromium as Cr(III) organo-metal complex

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive
Chromium as Cr(III) organo-metal complex	Yes.	Yes.
PARAFFIN OILS	Yes.	No.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : **1/27/2014.**

Date of issue : 1/27/2014.

Date of previous issue : 7/1/2013.

Version : 2

Indicates information that has changed from previously issued version.

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While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

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Enriching lives through innovation

LANASET® BLUE 2R

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	07/07/2015	400001005647	Date of first issue: 07/07/2015

SECTION 1. IDENTIFICATION

Product name : LANASET® BLUE 2R

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Cust ser: (888) 514 4558

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Textile dyes, finishing and impregnating products; including bleaches and other processing aids

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

Acute aquatic toxicity : Category 3

Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P363 Wash contaminated clothing before reuse.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
Disposal:
P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
2-Anthracenesulfonic acid, 1-amino-4-[[3,5-bis[[(2-chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxo-,	80010-51-1	30 - 60
Chromate(2-), [4-[2-[5-chloro-2-(hydroxy-.kappa.O)-3-nitrophenyl]diazenyl-.kappa.N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onat	72017-66-4	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If inhaled
Move to fresh air.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
If symptoms persist, call a physician.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : In case of skin contact
Wash off immediately with plenty of water for at least 15 minutes.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.

In case of eye contact : In case of eye contact
Flush eyes with water as a precaution.
Remove contact lenses.
If eye irritation persists, consult a specialist.

If swallowed : If swallowed
Do NOT induce vomiting.
If a person feels unwell or symptoms of skin irritation appear,

consult a physician.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : No data is available on the product itself.

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

No data is available on the product itself.

Specific extinguishing methods : No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	:	No hazardous decomposition products are known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	P2 filter
Respiratory protection	:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection		
Material	:	Neoprene gloves
Break through time	:	< 1 h
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles.
Skin and body protection	:	Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	dark blue
Odor	:	odorless
Odor Threshold	:	No data is available on the product itself.
pH	:	7 - 7.5, Concentration: 20 g/l
Flash point	:	No data is available on the product itself.
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	Product resists ignition and does not promote flame spread.
		Product resists ignition and does not promote flame spread.
Upper explosion limit	:	No data is available on the product itself.
Lower explosion limit	:	No data is available on the product itself.
Vapor pressure	:	No data is available on the product itself.
Relative vapor density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	0.578 g/cm3 Bulk density
Solubility(ies)		
Water solubility	:	100 g/l (30 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Autoignition temperature	:	No data is available on the product itself.

Decomposition temperature	:	> 200 °C
Viscosity	:	No data is available on the product itself.
Oxidizing properties	:	None.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Impact sensitivity	:	Not impact sensitive.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	None known. Stable under normal conditions. No decomposition if stored and applied as directed. Dust may form explosive mixture in air.
Conditions to avoid	:	None. No data available
Hazardous decomposition products	:	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available
Acute toxicity (other routes of administration)	:	No data available

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Remarks: Product dust may be irritating to eyes, skin and respiratory system.

Respiratory or skin sensitization

Product:

Routes of exposure: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Causes sensitization.

Remarks: Causes sensitization.

Assessment: No data available

Germ cell mutagenicity

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Effects on fertility : No data available

Effects on fetal development : No data available

Reproductive toxicity - Assessment : No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Repeated dose toxicity

No data available

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish - Product : LC0: 30 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

LC50: 68 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l

aquatic invertebrates - Product		Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	No data available
M-Factor (Acute aquatic toxicity)	:	No data available
Toxicity to fish (Chronic toxicity)	:	No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	No data available
M-Factor (Chronic aquatic toxicity)	:	No data available
Toxicity to bacteria - Product	:	IC50: > 400 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to soil dwelling organisms	:	No data available
Plant toxicity	:	No data available
Sediment toxicity	:	No data available
Toxicity to terrestrial organisms	:	No data available
Ecotoxicology Assessment Acute aquatic toxicity	:	No data available
Chronic aquatic toxicity	:	No data available
Toxicity Data on Soil	:	No data available
Other organisms relevant to the environment	:	No data available

Further information:
No data available

Persistence and degradability

Biodegradability - Product	:	Biodegradation: 20 - 30 % Exposure time: 28 d Method: OECD Test Guideline 302B
Biochemical Oxygen Demand (BOD) - Product	:	20 mgO2/g
Chemical Oxygen Demand (COD) - Product	:	1230 mgO2/g
BOD/COD	:	No data available

ThOD	:	No data available
BOD/ThOD	:	No data available
Dissolved organic carbon (DOC)	:	No data available
Physico-chemical removability	:	No data available
Stability in water	:	No data available
Photodegradation	:	No data available
Impact on Sewage Treatment	:	No data available

Bioaccumulative potential

Bioaccumulation	:	No data available

Ingredients:

2-Anthracenesulfonic acid, 1-amino-4-[[3,5-bis[[(2-chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxo-,:

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Chromate(2-), [4-[2-[5-chloro-2-(hydroxy-.kappa.O)-3-nitrophenyl]diazenyl-.kappa.N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onat:

Partition coefficient: n-octanol/water	:	log Pow: < 3 (20 °C) Method: No information available.

Mobility in soil

Mobility	:	No data available
Distribution among environmental compartments	:	No data available
Stability in soil	:	No data available

Other adverse effects

Environmental fate and pathways	:	No data available
Results of PBT and vPvB assessment	:	No data available
Endocrine disrupting potential	:	No data available
Adsorbed organic bound halogens (AOX) - Product	:	7.3 % Test substance: Chlorine

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information - Product	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.
Global warming potential (GWP)	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA
Not regulated as a dangerous good

IMDG
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

DOT Classification
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM TRIPOLYPHOSPHATE	7758-29-4	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard
No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Pennsylvania Right To Know

2-Anthracenesulfonic acid, 1-amino-4-[[3,5-bis[[(2-chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxo-,	80010-51-1	50 - 70 %
Dextrin	9004-53-9	20 - 30 %
Water	7732-18-5	5 - 10 %
Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	9084-06-4	5 - 10 %
Triphosphoric acid, sodium salt (1:5)	7758-29-4	1 - 5 %

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

Quinoline	91-22-5
Paraffin oil	8012-95-1
Formaldehyde	50-00-0
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7

The ingredients of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory
DSL : This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.
: LANASET® YELLOW 4GN
AICS : On the inventory, or in compliance with the inventory

NZIoC	:	On the inventory, or in compliance with the inventory
	:	DISPERGATOR CC GRANULES
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

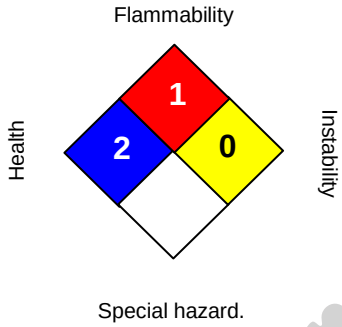
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Revision Date : 07/07/2015

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® BLUE 5G

1 . Product and company identification

Product name : **LANASET® BLUE 5G**
Material uses : Textile dye
Chemical family : Anthraquinone dye preparation
MSDS # : 00041694
Validation date : 6/10/2013.

Supplier/Manufacturer : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

In case of emergency (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

Physical state : Solid. [Powder]
Odor : Odorless.
Color : Blue.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
AQUATIC TOXICITY (CHRONIC) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.

Precautionary statements : Wear eye or face protection: Recommended: Tightly fitting safety goggles. Avoid release to the environment. Wash hands thoroughly after handling. Collect spillage. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Sodium [[(Chloroacetyl)amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9,10-dioxo-1-anthracenyl]amino]phenoxy] methylbenzenesulfonic acid	60 - 100	72391-24-3
Cumene-4-sulfonic acid sodium salt	7 - 13	28348-53-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities :

Section 7. Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: Tightly fitting safety goggles

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P1

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Powder]

Color : Blue.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 8 to 8.6 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Specific gravity : Not available.

Water Solubility : 65 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >180°C (>356°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 440 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>2000 mg/kg
Cumene-4-sulfonic acid sodium salt	-	LD50 Dermal	Rabbit	>2000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>7000 mg/kg
LANASET BLUE 5G	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
LANASET BLUE 5G	-	Rabbit	Skin - Non-irritant.

Conclusion/Summary

Skin : Non-irritating to the skin.

Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid — No known significant effects or critical hazards.

Cumene-4-sulfonic acid sodium salt — No known significant effects or critical hazards.

Eyes : Irritating to eyes. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid — No known significant effects or critical hazards.

Cumene-4-sulfonic acid sodium salt — No known significant effects or critical hazards.

Respiratory : Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid — No known significant effects or critical hazards.

Cumene-4-sulfonic acid sodium salt — No known significant effects or critical hazards.

Sensitization

Section 11. Toxicological information

Product/ingredient name	Test	Route of exposure	Species	Result
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Cumene-4-sulfonic acid sodium salt	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
LANASET BLUE 5G	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : Irritating to mouth, throat and stomach.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>78	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>300	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	1.3	mg/l
Cumene-4-sulfonic acid sodium salt	DIN DIN 38412 Part 8	Acute	IC50	48 hours	Bacteria	>1000	mg/l
	DIN DIN 38412 (Lumistox test)	Acute	LC0	48 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Chronic	EC50	21 days	Daphnia	154	mg/l
	Unknown guidelines	Chronic	NOEC	21 days	Daphnia	>30	mg/l

Section 12. Ecological information

LANASET BLUE 5G	Not known OECD 202 *Daphnia* sp. Acute Immobilisation Test - OECD 203 Fish, Acute Toxicity Test	Acute Acute Acute	EC50 IC50 LC50	48 hours 3 hours 48 hours	Daphnia Bacteria Fish	>78 >300 4.4	mg/l mg/l mg/l

Conclusion/Summary : Toxic to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	28 days	40 %
LANASET BLUE 5G	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	28 days	40 to 50 %

Conclusion/Summary : Partially eliminated by adsorption onto effluent treatment sludge.

Cumene-4-sulfonic acid sodium salt — Eliminated by biodegradation

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET BLUE 5G	-	-	Not readily
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Sodium [[(Chloroacetyl) amino]methyl][4-[[4-(cyclohexylamino)-9, 10-dihydro-9, 10-dioxo-1-anthracenyl] amino]phenoxy] methylbenzenesulfonic acid	<3	-	low

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	:	0	mgO2/g	
COD	:	1100	mgO2/g	
TOC	:	37.5	%	
Organohalogen content	:	3.7	%	Chloro
Phosphorus Content	:	0	%	
Nitrogen Content	:	0.00295	%	

Section 12. Ecological information

: Metal content under the ETAD recommended limits.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

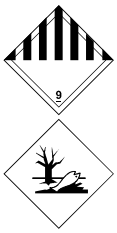
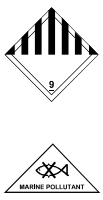
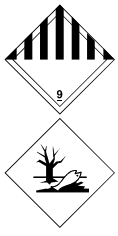
Proper shipping name

DOT : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF). Marine pollutant

TDG : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF) Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF) Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (ANTHRAQUINONE DYESTUFF)

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3077	9	III		Only regulated in Bulk. Marine Pollutant
TDG Classification	UN3077	9	III		Only regulated in Bulk. Marine pollutant
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A, S-F

Section 14. Transport information

IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

United States

U.S. Federal regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : No ingredients listed.

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 : No ingredients listed.

CERCLA Hazardous substances : No ingredients listed.

State regulations

PENNSYLVANIA - RTK : No ingredients listed.

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

International regulations

Canada

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2B: Material causing other toxic effects (Toxic).

Section 15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil

Regulation : Decreto Federal n.º 2657 de 3 de novembro de 1998

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

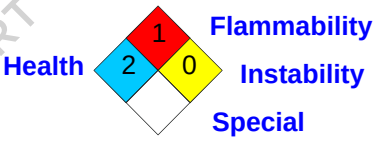
Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	1
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : **6/10/2013.**

Date of issue : 6/10/2013.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Section 16. Other information

LANASET® is a registered trademark of Huntsman Corporation or an affiliate thereof in one or more countries, but not all countries.

Notice to reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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SAFETY DATA SHEET

LANASET® BORDEAUX B

HUNTSMAN
Enriching lives through innovation

Section 1. Identification

GHS product identifier : **LANASET® BORDEAUX B**

Product code : 00041718

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 3.1%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 3.1%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements : Wear protective gloves: < 1 hour (breakthrough time): butyl or neoprene. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Chromium as Cr(III) organo-metal complex	30 - 60	ACCN # 130519
Disodium 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis[6-amino-4-hydroxynaphthalene-2-sulphonate]	3 - 7	52333-30-9
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	3 - 7	137-20-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

~~**Description of necessary first aid measures**~~

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Section 4. First aid measures

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Dark red

Odor : Odorless.

Odor threshold : Not applicable.

pH : 7.5 to 8 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Section 9. Physical and chemical properties

Boiling/condensation point	:	Not available.
Flash point	:	Closed cup: Not applicable.
Evaporation rate	:	Not applicable.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility in water	:	Not available.
Water Solubility Result	:	20 g/l 30 deg C
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	>200°C (>392°F)
Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B	:	450 °C
Explosive properties	:	Not explosive
Oxidizing properties	:	None.
Density	:	0.74 g/cm³ [20°C (68°F)]
Viscosity	:	Dynamic (room temperature): Not applicable. Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	>2000 mg/kg
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	Unknown guidelines Not known	LD50 Oral	Rat	>4000 mg/kg
LANASET BORDEAUX B	-	LD50 Oral	Rat	>2000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Chromium as Cr(III) organo-metal complex	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Non-irritant.
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.

Conclusion/Summary

Skin : Non-irritant. OECD 404

Chromium as Cr(III) organo-metal complex	Non-irritating to the skin.
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Eyes : Non-irritant. OECD 405

Chromium as Cr(III) organo-metal complex	Non-irritating to the eyes.
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Respiratory :

Chromium as Cr(III) organo-metal complex	No additional information.
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Section 11. Toxicological information

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Chromium as Cr(III) organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Disodium 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxysulphonyl-2,1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
LANASET BORDEAUX B	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing

Mutagenicity

Product/ingredient name	Test	Result
Chromium as Cr(III) organo-metal complex	Subject: Bacteria	Positive
	Experiment: In vitro Subject: Mammalian-Animal	Negative

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Chromium as Cr(III) organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	2.15	mg/l
	No official guidelines Internal Method (BST)	Acute	IC50	3 hours	Bacteria	>180	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	9	mg/l
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>40.4	mg/l

Section 12. Ecological information

	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
LANASET BORDEAUX B	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	7	mg/l
	-	Acute	IC50	3 hours	Bacteria	>300	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC0	48 hours	Fish	10	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	18	mg/l

Conclusion/Summary : Toxic to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Chromium as Cr(III) organo-metal complex	OECD 301A Ready Biodegradability - DOC Die-Away Test	28 days	<2 %
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	28 days	0 %
LANASET BORDEAUX B	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	30 to 40 %

Conclusion/Summary : Partially eliminated by adsorption onto effluent treatment sludge.

Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate] — Poorly eliminated by biodegradation

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET BORDEAUX B	-	-	Not readily
Chromium as Cr(III) organo-metal complex	-	-	Not readily
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Chromium as Cr(III) organo-metal complex	<3	-	low
Disodium 5,5'-[(1-methylethylidene)bis(4, 1-phenyleneoxysulphonyl-2, 1-phenyleneazo)]bis [6-amino-4-hydroxynaphthalene-2-sulphonate]	<3	-	low

Mobility in soil

Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 210	mgO2/g	
COD	: 1150	mgO2/g	
TOC	: 39.5	%	
Organohalogen content	: 0.02	%	Chloro
Phosphorus Content	: 0	%	
Nitrogen Content	: 7	%	
Metal Content	: 1.8	%	Chromium as Cr(III) organo-metal complex
	: 0.2	%	Cobalt as organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Environmentally hazardous substance, solid, n.o.s. (AZO METAL COMPLEX DYESTUFF) (Chromium as Cr(III) organo-metal complex). Marine pollutant

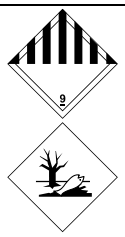
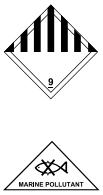
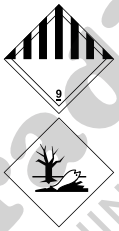
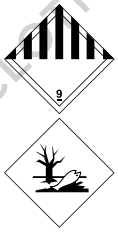
TDG : Environmentally hazardous substance, solid, n.o.s. (AZO METAL COMPLEX DYESTUFF) (Chromium as Cr(III) organo-metal complex). Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. (AZO METAL COMPLEX DYESTUFF). Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (AZO METAL COMPLEX DYESTUFF)

Regulatory information	UN number	Classes	PG*	Label	Additional information

Section 14. Transport information

DOT Classification	UN3077	9	III		Marine Pollutant Only regulated in Bulk.
TDG Classification	UN3077	9	III		-
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A, S-F
IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Section 15. Regulatory information

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	46.34
Cobalt as organo-metal complex	6.6924

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
Chromium as Cr(III) organo-metal complex	46.34

CERCLA Hazardous substances :

Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
Chromium as Cr(III) organo-metal complex	46.34	Listed	No RQ assigned	
Cobalt as organo-metal complex	6.6924	Listed	No RQ assigned	
Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate	4.0986	Listed	5000	121993

State regulations

PENNSYLVANIA - RTK : Chromium as Cr(III) organo-metal complex, Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate, Sodium sulfate, Cobalt as organo-metal complex

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

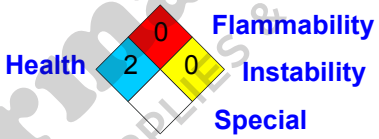
Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Date of issue : 1/7/2014.
Date of previous issue : 04/13/2009
Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® RED 2B

HUNTSMAN
Enriching lives through innovation

Section 1. Identification

GHS product identifier : **LANASET® RED 2B**

Product code : 00041721

Other means of identification : Not available.

Product type : Solid.

Material uses : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : No signal word.

Hazard statements : Toxic to aquatic life with long lasting effects.

Precautionary statements : Avoid release to the environment. Collect spillage. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
ACID RED 407	13 - 30	72017-66-4
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	7 - 13	36290-04-7
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	1 - 3	137-20-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Section 4. First aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
Carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ACID RED 407	**OSHA PEL (United States, 2/2013).** TWA: 0.5 mg/m³, (as Cr) 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: Tightly fitting safety goggles

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Powder]

Color : Red.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 6 to 8 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Soluble

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >200°C (>392°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 400 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.4 to 0.5 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
ACID RED 407	Unknown guidelines Not known	LD50 Oral	Rat	>2000 mg/kg
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	LD50 Oral	Mouse	4880 mg/kg
LANASET RED 2B	-	LD50 Oral	Rat	>2000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
LANASET RED 2B	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Non-irritant.
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.

Conclusion/Summary

Section 11. Toxicological information

Skin : Non-irritating to the skin.

ACID RED 407	No additional information.
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Eyes : Non-irritating to the eyes.

ACID RED 407	No additional information.
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Respiratory :

ACID RED 407	No additional information.
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No additional information.
Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
ACID RED 407	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing

Mutagenicity

Product/ingredient name	Test	Result
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	Subject: bacteria/yeast	Negative

Carcinogenicity

Not available.

Carcinogenic class

Product/ingredient name	IARC	OSHA
ACID RED 407	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 11. Toxicological information

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
ACID RED 407	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	33.4	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>300	mg/l
	Unknown guidelines Not known	Acute	LC50	48 hours	Fish	0.6	mg/l
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	Acute	EC50	48 hours	Daphnia	37	mg/l
	No official guidelines	Acute	EC50	48 hours	Daphnia	9.9 to 15	mg/l
	OECD OECD 202 screening	Acute	EC50	48 hours	Daphnia	39	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>1000	mg/l
LANASET RED 2B	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>30	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	281	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	3	mg/l

Conclusion/Summary : Toxic to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
ACID RED 407	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0 %
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	No official guidelines	28 days	<60 %
	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	28 days	<5 %
LANASET RED 2B	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	30 to 40 %

Conclusion/Summary : Partially eliminated by adsorption onto effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET RED 2B	-	-	Not readily
ACID RED 407	-	-	Not readily
2-Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	-	-	Not readily

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ACID RED 407	<3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 190	mgO2/g	
COD	: 1025	mgO2/g	
TOC	: Not determined.		
Organohalogen content	: 2.3	%	Chloro
Phosphorus Content	: 0	%	
Nitrogen Content	: 3.8	%	
Metal Content	: 1.2	%	Chromium as Cr(III) organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

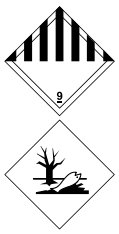
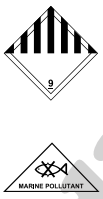
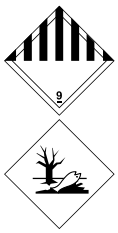
DOT : Environmentally hazardous substance, solid, n.o.s. Chromium complex monoazo dyestuff. Marine pollutant

TDG : Environmentally hazardous substance, solid, n.o.s. Chromium complex monoazo dyestuff. Marine pollutant

IMDG : Environmentally hazardous substance, solid, n.o.s. Chromium complex monoazo dyestuff Marine pollutant

IATA : Environmentally hazardous substance, solid, n.o.s. (CHROMIUM COMPLEX MONOAZO DYESTUFF)

Section 14. Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3077	9	III		-not regulated in bulk
TDG Classification	UN3077	9	III		-
IMDG Classification	UN3077	9	III		**Emergency schedules (EmS)** F-A S-F
IATA Classification	UN3077	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only** Quantity limitation: 400 kg Packaging instructions: 956

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

Section 15. Regulatory information

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Not classified.

	Product name	Concentration %
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :	Chromate(2-), [4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-2, 4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato (2-)]-[3-[[1-(3-chlorophenyl)-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl] azo]-4-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium salt	23.27

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

	Product name	Concentration %
SARA 313 :	ACID RED 407	23.27

Form R - Reporting requirements

	Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
CERCLA Hazardous substances :	ACID RED 407	23.27	Listed	No RQ assigned	

State regulations

PENNSYLVANIA - RTK : Chromate(2-), [4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-2, 4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)]-[3-[[1-(3-chlorophenyl)-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-hydroxy-5-nitrobenzenesulfonato(3-)]-, disodium salt

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

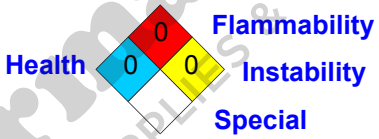
Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Indicates information that has changed from previously issued version.

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Notice to reader

Section 16. Other information

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® VIOLET B

HUNTSMAN
Enriching lives through innovation

Section 1. Identification

GHS product identifier : **LANASET® VIOLET B**

Product code : 00041693

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AQUATIC HAZARD (LONG-TERM) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%

GHS label elements

Signal word : No signal word.

Hazard statements : Harmful to aquatic life with long lasting effects.

Precautionary statements : Avoid release to the environment. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	1 - 3	137-20-2
Citric acid	0.1 - 1	77-92-9
Cobalt as organo-metal complex	0.1 - 1	70851-34-2, 73612-41-6
Chromium as Cr(III) organo-metal complex	0.1 - 1	41741-86-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Not available.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Chromium as Cr(III) organo-metal complex	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Powder]

Color : Violet.

Odor : Odorless.

Odor threshold : Not available.

pH : 6 to 7 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 60 g/l 30 deg C

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >135°C (>275°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 460 °C

Oxidizing properties : None.

Density : 0.53 g/cm³ [20°C (68°F)]

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Citric acid	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat - Male, Female	>2000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	5400 mg/kg
Cobalt as organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	3900 mg/kg
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	>5000 mg/kg
LANASET VIOLET B	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Citric acid	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Irritant
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.

Section 11. Toxicological information

Conclusion/Summary

Skin : Non-irritant. Rabbit

Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.
Citric acid	Non-irritating to the skin.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.

Eyes : Non-irritant. Rabbit

Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.
Citric acid	Irritating to eyes.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.

Respiratory :

Sodium 2-[methyloleoylamino] ethane-1-sulphonate	No additional information.
Citric acid	No additional information.
Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Cobalt as organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
Chromium as Cr(III) organo-metal complex	No official guidelines Buehler or maximization test	skin	Guinea pig	Sensitizing

Mutagenicity

Product/ingredient name	Test	Result
Citric acid	Experiment: In vitro Subject: Mammalian-Human	Positive
	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vivo Subject: Mammalian-Animal	Negative
	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Conclusion/Summary :

Section 11. Toxicological information

Citric acid	In accordance with column 2 of Annex VII - X of Regulation (EC) No 1907/2006, the test for this property of the substance does not need to be conducted.

Carcinogenic class

Product/ingredient name	IARC	OSHA
Chromium as Cr(III) organo-metal complex	3	-

Reproductive toxicity

Conclusion/Summary :

Citric acid	In accordance with column 2 of Annex VII - X of Regulation (EC) No 1907/2006, the test for this property of the substance does not need to be conducted.

Teratogenicity

Conclusion/Summary :

Citric acid	In accordance with section 1 of Regulation (EC) No 1907/2006, Annex XI, this test does not appear scientifically necessary.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary :

Citric acid	In accordance with section 1 of Regulation (EC) No 1907/2006, Annex XI, this test does not appear scientifically necessary.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Citric acid	Unknown guidelines	Acute	LC50	24 hours Static	Daphnia	1535	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours Static	Fish	440 to 760	mg/l
	No official guidelines	Chronic	NOEC	8 days Static	Algae	425	mg/l
Cobalt as organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	30.5	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	0.52	mg/l
LANASET VIOLET B	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>68	mg/l

Section 12. Ecological information

	-	Acute	IC50	3 hours	Bacteria	>300	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	40	mg/l

Conclusion/Summary : Harmful to aquatic organisms if run directly to surface waters.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Citric acid	OECD 301E Ready Biodegradability - Modified OECD Screening Test	19 days	100 %
	OECD 301B Ready Biodegradability - CO_2 Evolution Test	28 days	97 %
	OECD OECD 302B modified	14 days	85 %
Cobalt as organo-metal complex	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0.3 %
LANASET VIOLET B	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	28 days	80 to 90 %

Conclusion/Summary : Eliminated by adsorption onto effluent treatment sludge.

Citric acid Readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET VIOLET B	-	-	Not readily
Citric acid	-	-	Inherent
Cobalt as organo-metal complex	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Citric acid	-0.76 to -0.12	-	low
Cobalt as organo-metal complex	<3	-	low
Chromium as Cr(III) organo-metal complex	<3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	:	50	mgO2/g	
COD	:	1100	mgO2/g	
TOC	:	41	%	
Organohalogen content	:	3.4	%	Chloro
Phosphorus Content	:	0	%	
Nitrogen Content	:	5.2	%	
Metal Content	:	100	ppm	Chromium as Cr(III) organo-metal complex
	:	46	ppm	Cobalt as organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Classification	Not regulated.	-	-		-
IATA Classification	Not regulated.	-	-		-

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

Section 15. Regulatory information

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Not classified.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : No ingredients listed.

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
Cobalt as organo-metal complex	0.18128

CERCLA Hazardous substances :

Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
Cobalt as organo-metal complex	0.18128	Listed		
Chromium as Cr(III) organo-metal complex	0.16946	Listed	No RQ assigned	
Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate	0.0025	Listed	5000	200000000
Formaldehyde	0.000150254	Listed	100	66553969

State regulations

PENNSYLVANIA - RTK : No ingredients listed.

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive
Mixture of hydrocarbons ex petroleum	Yes.	No.
Formaldehyde	Yes.	No.

Canadian regulations

CEPA DSL : All components are listed or exempted.

Section 15. Regulatory information

WHMIS Classes : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

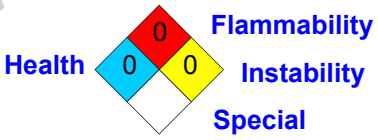
Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0
Personal protection	

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Date of previous issue : No previous validation.

Version : 1

Section 16. Other information

Indicates information that has changed from previously issued version.

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Notice to reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® YELLOW 2R GR

HUNTSMAN
Enriching lives through innovation

Section 1. Identification

GHS product identifier : **LANASET® YELLOW 2R GR**

Product code : 00043661

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements : Wear protective gloves: < 1 hour (breakthrough time): butyl or neoprene. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Cobalt as organo-metal complex	13 - 30	70851-34-2, 73612-41-6
Chromium as Cr(III) organo-metal complex	13 - 30	41741-86-0
PARAFFIN OILS	1 - 3	8012-95-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Section 4. First aid measures

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Not available.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Chromium as Cr(III) organo-metal complex PARAFFIN OILS	**OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hours. **ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P2

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Yellow.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 6.5 to 7.5 [Conc. (% w/w): 0.1%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Not available.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 100 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >200°C (>392°F)

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.7 to 0.8 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Cobalt as organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	3900 mg/kg
Chromium as Cr(III) organo-metal complex	Unknown guidelines Not known	LD50 Oral	Rat	>5000 mg/kg
PARAFFIN OILS	-	LC50 Inhalation Dusts and mists	Rat	2062 mg/l
	-	LD50 Oral	Rat	22000 mg/kg
LANASET YELLOW 2R GR	-	LD50 Oral	Rat	>2000 mg/kg

Irritation/Corrosion

Conclusion/Summary

Skin : Non-irritant. The toxicological data is based on a product with comparable composition.

Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
PARAFFIN OILS	No additional information.

Eyes : Non-irritant. The toxicological data is based on a product with comparable composition.

Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
PARAFFIN OILS	No additional information.

Respiratory :

Cobalt as organo-metal complex	No additional information.
Chromium as Cr(III) organo-metal complex	No additional information.
PARAFFIN OILS	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Cobalt as organo-metal complex	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
Chromium as Cr(III) organo-metal complex	No official guidelines Buehler or maximization test	skin	Guinea pig	Sensitizing
LANASET YELLOW 2R GR	No official guidelines Buehler or maximization test	skin	Guinea pig	Sensitizing

Mutagenicity

Not available.

Carcinogenicity

Section 11. Toxicological information

Not available.

Carcinogenic class

Product/ingredient name	IARC	OSHA
Chromium as Cr(III) organo-metal complex	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Cobalt as organo-metal complex	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	30.5	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	0.52	mg/l
PARAFFIN OILS	Unknown guidelines Not known	Acute	LC0	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC100	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC50	96 hours	Fish	>1000	mg/l
LANASET YELLOW 2R GR	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	15	mg/l

Conclusion/Summary : Harmful to aquatic organisms if run directly to surface waters. Commercial product tested.

Persistence and degradability

Product/ingredient name	Test	Period	Result
Cobalt as organo-metal complex	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0.3 %
LANASET YELLOW 2R GR	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	>90 %

Conclusion/Summary : Eliminated by adsorption onto effluent treatment sludge.

Section 12. Ecological information

Cobalt as organo-metal complex	Poorly eliminated by adsorption on effluent treatment sludge.
Chromium as Cr(III) organo-metal complex	Partially eliminated by adsorption onto effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET YELLOW 2R GR	-	-	Not readily
Cobalt as organo-metal complex	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Cobalt as organo-metal complex	<3	-	low
Chromium as Cr(III) organo-metal complex	<3	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	: 260	mgO2/g	
COD	: 1125	mgO2/g	
TOC	: 42.2	%	
Organohalogen content	: 0.9	%	Chloro
Phosphorus Content	: 0.6	%	as phosphate
Nitrogen Content	: 4	%	
Metal Content	: 1.4	%	Chromium as Cr(III) organo-metal complex
	: 0.7	%	Cobalt as organo-metal complex

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Classification	Not regulated.	-	-		-
IATA Classification	Not regulated.	-	-		-

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Cobalt as organo-metal complex	18.128
Chromium as Cr(III) organo-metal complex	16.946

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

Section 15. Regulatory information

		Product name	Concentration %
SARA 313	:	Cobalt as organo-metal complex	18.128
Form R - Reporting requirements		Chromium as Cr(III) organo-metal complex	16.946

		Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
CERCLA Hazardous substances	:	Cobalt as organo-metal complex	18.128	Listed	No RQ assigned	
		Chromium as Cr(III) organo-metal complex	16.946	Listed	No RQ assigned	

State regulations

PENNSYLVANIA - RTK : Cobalt as organo-metal complex, Mixture of hydrocarbons ex petroleum, Chromium as Cr(III) organo-metal complex

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive
PARAFFIN OILS	Yes.	No.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

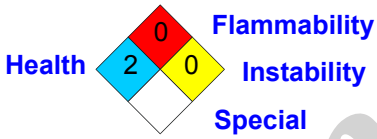
Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0
Personal protection	X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Version : 1

Indicates information that has changed from previously issued version.

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SAFETY DATA SHEET

LANASET® YELLOW 4GN

Section 1. Identification

GHS product identifier : **LANASET® YELLOW 4GN**

Product code : 00042219

Other means of identification : Not available.

Product type : Solid.

Material uses : Textile dye

Supplier's details : Huntsman International, LLC
Textile Effects Division
P.O. Box 4980
The Woodlands, TX 77387

Customer service telephone: (888) 514-4558

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements : Wear protective gloves: < 1 hour (breakthrough time): butyl or neoprene. In case of inadequate ventilation wear respiratory protection: Recommended: Respiratory protection, filter P3. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo]benzenesulphonate]	30 - 60	72828-69-4
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl)amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2,5-dichlorobenzenesulfonate	7 - 13	70247-70-0
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl]azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]benzenesulphonate	3 - 7	72479-28-8
PARAFFIN OILS	1 - 3	8012-95-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Flash point : Closed cup: Not applicable.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
Carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Not explosive

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities :

Section 7. Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
PARAFFIN OILS	**ACGIH TLV (United States, 6/2013).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): butyl or neoprene

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection, filter P3

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [granules]

Color : Orange.

Odor : Odorless.

Odor threshold : Not applicable.

pH : 8.5 to 9 [Conc. (% w/w): 2%]

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility in water : Not available.

Water Solubility Result : 100 g/l 30 deg C

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : >190°C (>374°F)

Ignition Temperature (Deg C) : SIT > 450 *ASTM-D1929B : 450 °C

Explosive properties : Not explosive

Oxidizing properties : None.

Density : 0.7 to 0.8 g/cm³ [20°C (68°F)]

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo] benzenesulphonate]	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>5000 mg/kg
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	>15000 mg/kg
PARAFFIN OILS	-	LC50 Inhalation Dusts and mists	Rat	2062 mg/l
	-	LD50 Oral	Rat	22000 mg/kg
LANASET YELLOW 4GN	-	LD50 Oral	Rat	>5000 mg/kg

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
LANASET YELLOW 4GN	- -	Rabbit Rabbit	Eyes - Non-irritant. Skin - Non-irritant.

Conclusion/Summary

Skin : Non-irritating to the skin.

Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo] benzenesulphonate]	No additional information.
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
Sodium 4-chloro-3-[4-[[5-chloro-2-	No additional information.

Section 11. Toxicological information

	(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	
	PARAFFIN OILS	No additional information.
Eyes :	Non-irritating to the eyes.	
	Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo] benzenesulphonate]	No additional information.
	Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
	Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	No additional information.
	PARAFFIN OILS	No additional information.
Respiratory :	Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo] benzenesulphonate]	No additional information.
	Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	No additional information.
	Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	No additional information.
	PARAFFIN OILS	No additional information.

Sensitization

Section 11. Toxicological information

Product/ingredient name	Test	Route of exposure	Species	Result
Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo]benzenesulphonate]	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl)amino)-2-sulfophenyl)azo)-3-methylpyrazolon-1-yl)-2,5-dichlorobenzenesulfonate	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl]azo]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]benzenesulphonate	OECD 406 Skin Sensitization	skin	Guinea pig	Not sensitizing
LANASET YELLOW 4GN	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing

Conclusion/Summary

Respiratory : This dyestuff contains C.I. Reactive Yellow 39 for which cases of respiratory sensitisation have been observed. Care should be taken to avoid inhalation. Should an individual become sensitized a physician should be consulted and all contact with reactive dyes must cease immediately.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo]benzenesulphonate]	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>51.1	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	13	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	NOEC	48 hours	Daphnia	25.4	mg/l
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl)amino)-2-sulfophenyl)azo)-3-methylpyrazolon-1-yl)-2,5-dichlorobenzenesulfonate	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>189	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>320	mg/l
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl]azo]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]benzenesulphonate	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours	Daphnia	>18	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	30	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	NOEC	48 hours	Daphnia	5	mg/l
PARAFFIN OILS	Unknown guidelines Not known	Acute	LC0	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC100	96 hours	Fish	>1000	mg/l
	Unknown guidelines Not known	Acute	LC50	96 hours	Fish	>1000	mg/l
LANASET YELLOW 4GN	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours	Bacteria	>400	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	48 hours	Fish	45	mg/l

Conclusion/Summary : Harmful to aquatic organisms if run directly to surface waters.

Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Period	Result
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	0 %
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	28 days	92.3 %
LANASET YELLOW 4GN	OECD 303B Simulation Test - Aerobic Sewage Treatment – Biofilms	28 days	50 to 60 %

Conclusion/Summary : Partially eliminated by adsorption onto effluent treatment sludge.

Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	Poorly eliminated by adsorption on effluent treatment sludge.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LANASET YELLOW 4GN	-	-	Not readily
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	-	-	Not readily
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4, 5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Disodium 1,1'-isopropylidenedi-p-phenylenebis[2-[[5-amino-3-methyl-1-(3-sulphonatophenyl)-1H-pyrazol-5-yl]azo] benzenesulphonate]	0.57	-	low
Sodium 4-(4-((5-((2-Bromo-1-oxo-2-propenyl) amino)-2-sulfophenyl) azo)-3-methylpyrazolon-1-yl)-2, 5-dichlorobenzenesulfonate	-3.3	-	low
Sodium 4-chloro-3-[4-[[5-chloro-2-(2-chlorophenoxy)phenyl] azo]-4,	<3	-	low

Section 12. Ecological information

5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl] benzenesulphonate			

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5	:	70	mgO2/g	
COD	:	980	mgO2/g	
TOC	:	33	%	
Organohalogen content	:	1	%	Calculated as chloro
Phosphorus Content	:	0.27	%	as phosphate
Nitrogen Content	:	7.6	%	
Metal Content	:	Metal content under the ETAD recommended limits.		

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Section 14. Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Classification	Not regulated.	-	-		-
IATA Classification	Not regulated.	-	-		-

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 : No ingredients listed.

	Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
CERCLA Hazardous substances :	Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate	1.0964	Listed	5000	456038

Section 15. Regulatory information

State regulations

PENNSYLVANIA - RTK : Mixture of hydrocarbons ex petroleum, Triphosphoric acid, pentasodium salt; Triphosphoric acid, sodium salt (1:5); Sodium phosphate; Pentasodium tripolyphosphate, Sodium sulfate

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive
PARAFFIN OILS	Yes.	No.

Canadian regulations

CEPA DSL : At least one component is not listed.

WHMIS Classes : Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists

: **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

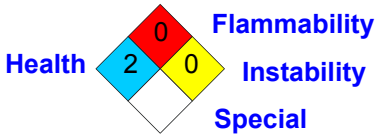
Health	*	2
Flammability		0
Physical hazards		0
Personal protection		X

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :

Section 16. Other information



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