## 1. Composition/Information on Ingredients and Exposure Limits/Guidelines

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>EINECS</th>
<th>CAS No.</th>
<th>%</th>
<th>Exposure Limits in Air</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
</tr>
<tr>
<td>Proprietary Alphatic Ether Alcohol</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-35</td>
<td>NE</td>
</tr>
<tr>
<td>Magenta Colorant</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-30</td>
<td>NE</td>
</tr>
<tr>
<td>Orange Colorant</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-20</td>
<td>NE</td>
</tr>
<tr>
<td>Black Pigment</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-10</td>
<td>1.5</td>
</tr>
<tr>
<td>Binder 1</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-10</td>
<td>NE</td>
</tr>
<tr>
<td>Yellow Colorant 1</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-10</td>
<td>NE</td>
</tr>
<tr>
<td>Yellow Colorant 2</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-10</td>
<td>NE</td>
</tr>
<tr>
<td>Diethylene Glycol</td>
<td>203-872-2</td>
<td>111-46-6</td>
<td>10-20</td>
<td>NE</td>
</tr>
<tr>
<td>Glycerin</td>
<td>200-289-5</td>
<td>56-81-5</td>
<td>0-5</td>
<td>10 ppm</td>
</tr>
<tr>
<td>Binder 1</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Blue Colorant</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Green Colorant</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Polycarboxylate Potassium Salt</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Solvent 1</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Solvent 2</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Surfactant</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>0-5</td>
<td>NE</td>
</tr>
<tr>
<td>Water and other components</td>
<td></td>
<td></td>
<td>Balance</td>
<td>None</td>
</tr>
</tbody>
</table>

## 2. Physical & Chemical Characteristics

**Boiling Point:** Not established  
**Vapor Pressure:** Not established  
**Vapor Density:** Not established  
**Solubility in Water:** Soluble  
**Appearance & Odor:** This product is a clear liquid that has a distinct odor and comes in a variety of colors (black, magenta, cyan, yellow, green and orange).  
**Specific Gravity:** Not established  
**Melting Point:** Not established  
**Evaporation Rate:** Not established
3. **Fire & Explosion Data**

   **Flash Point:** Not flammable  
   **Auto Ignition:** Not established  
   **Extinguishing Media:** Water spray, foam, halon, carbon dioxide, dry chemical, any other ABC class  
   **Special Fire Procedures:** Incipient fire responders should wear eye protection. Structural firefighters must wear self-contained breathing apparatus and full protective equipment. Due to the presence of colorants, the runoff water from these products can discolor contaminated objects. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse fire response equipment with soapy water before returning to service.  
   **Unusual Hazards:** When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (carbon oxides, nitrogen oxides, copper oxides).

4. **Reactivity Data**

   **Stable:** Stable  
   **Conditions to Avoid:** Exposure to or contact with extremely high temperatures  
   **Incompatibility:** Strong oxidizers, strong bases, strong acids and materials that are incompatible with water.  
   **Hazardous Decomposition:** If exposed to extremely high temperatures, this product can decompose to generate carbon oxides, nitrogen oxides, and copper oxides.  
   **Hazardous Polymerization:** Will not occur

5. **Health Hazards**

   **Routes of Entry:** Inhalation, contact with skin or eyes, skin absorption, ingestion  
   **Acute:** The ink may stain hair, skin and other contaminated tissue. Acute exposure to low concentrations of this product via skin contact, eye contact and inhalation may irritate contaminated tissue. Inhalation of higher levels may cause significant irritation and adverse effects on the central nervous system. Ingestion of small amounts will cause nausea, vomiting and diarrhea. Ingestion of large amounts may cause central nervous system effects (headaches, dizziness, anesthesia, drowsiness and unconsciousness).  
   **Chronic:** Chronic skin exposure to this product may cause dermatitis or allergic reaction in susceptible individuals. Chronic ingestion exposure may cause nausea, vomiting, headache, weakness, confusion, dizziness, unconsciousness and convulsions.  
   **Signs & Symptoms of Exposure:** Inhalation: This product does not normally present a significant inhalation hazard under anticipated circumstances of use. Inhalation of vapors, mists or sprays of this product may irritate the nose, throat and other tissues of the respiratory system. Symptoms of prolonged inhalation overexposure, especially as may occur in poorly ventilated areas, may include nausea, vomiting, headache weakness, confusion, dizziness, pulmonary edema, unconsciousness and convulsions. Contact with eyes or skin: Due to the colorants, skin contact may discolor contaminated areas. Skin contact may cause redness, pain or itching in sensitive individuals. Repeated or prolonged skin overexposure may cause dermatitis (dry, red skin). Eye contact with this product can moderately irritate the eyes, causing pain, tearing and redness. Because the eye tissue may be stained, vision may be temporarily blurred. Skin absorption: The components of this product are not known to be absorbed through intact contact. Ingestion: Though not anticipated to be a significant route of occupational exposure, ingestion of large quantities of this product may cause stomach paints, nausea, vomiting and discoloration of the mouth, teeth and tissues of the throat. If large quantities are ingested, symptoms may include central nervous system effects (headaches, dizziness,
MSDS

MATERIAL SAFETY DATA SHEET

RUPERT, GIBBON & SPIDER PO BOX 425, HEALDSBURG CA, 95448 TEL: (707) 433-9577 FAX: (707) 433-4906

anesthesia, drowsiness and unconsciousness) and kidney and liver degeneration. Chronic ingestion exposure may cause nausea, vomiting, unconsciousness and convulsions.

Injection: Accidental injection of this liquid (as may occur by a puncture with a contaminated object) will cause local pain, irritation and redness.

**Acute:** The ink may stain hair, skin and other contaminated tissue. Acute exposure to low concentrations of this product via skin contact, eye contact and inhalation may irritate contaminated tissue. Inhalation of higher levels may cause significant irritation and adverse effects on the central nervous system. Ingestion of small amounts will cause nausea, vomiting and diarrhea. Ingestion of large amounts may cause central nervous system effects (headaches, dizziness, anesthesia, drowsiness, unconsciousness) and kidney and liver degeneration.

**Chronic:** Chronic skin exposure to this product may cause dermatitis or allergic reaction in susceptible individuals. Chronic ingestion exposure may cause nausea, vomiting, headache, weakness, confusion, dizziness, unconsciousness and convulsions.

**Target Organs:** Acute: Skin, respiratory system, eyes, kidneys. Chronic: Skin, kidneys, reproductive system.

6. **Emergency & First Aid Procedures**

**Inhalation:** If vapors, sprays or mists of this product are inhaled, remove the contaminated individual to fresh air. If necessary, remove or cover gross contamination to avoid exposure to rescuers. Seek medical attention if adverse effect occurs.

**Eyes:** If vapors, sprays or mists of this product enter the eyes, open the contaminated individual’s eyes while under gently running water. Use sufficient force to open eyelids. Have the Have the contaminated individual “roll” eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention if any adverse effect occurs.

**Skin:** If this product contaminates the skin, immediately begin decontamination with running water and soap. The minimum recommended flushing time is 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate the eyes. The contaminated individual must seek medical attention if any adverse effect occurs.

**Ingestion:** If this product is swallowed, call physician or poison control center for most current information. Do not induce vomiting, unless directed by medical personnel. Have victim rinse mouth with water if conscious. Never induce vomiting or give diluents (mil or water) to someone who is unconscious, having convulsions or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head down position if possible) to maintain an open airway and prevent aspiration.

**Medical Conditions Aggravated by Exposure:** Skin, respiratory, liver or kidney disorders may be aggravated by prolonged overexposures to this product.

**Recommendations to Physicians:** Treatment may include Ipecac, lavage, activated charcoal, cathartics and supportive measures.

7. **Special Precautions & Spill/Leak Procedures**

**Handling & Storage:** All employees who handle this material should be trained to handle it safely. Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be store in secondary containers or in a diked area as appropriate. “No smoking” signs sin storage and use areas, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid or vapors; therefore, empty containers should be handled with care.
Protective Practices During Maintenance of Contaminated Equipment: Follow practices indicated in the section for accidental release. Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to application U.S. Federal, State, or local procedures.

Steps if Spilled: For incidental spills (less than 1 L of liquid from a bottle), wear rubber gloves, splash goggles and appropriate body protection. Trained personnel following preplanned procedures should handle non-incidental releases (10 L of liquid leaking from a crate of several containers). In the event of a non-incidental spill, clear the area and protect people. The minimum personal protective equipment for response to a non-incidental spill is the follows: rubber gloves, rubber boots, face shield and Tyvek suit. The minimum level of personal protection equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be level B: triple-glove (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and self-contained breathing apparatus. Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse area thoroughly with soapy water after liquid has dried. Decontaminate the area thoroughly. If necessary, discard all stained response equipment or rinse with soapy water before returning such equipment to service. Please all spill residue in an appropriate container and seal.

Waste Disposal: Dispose of in accordance with applicable U.S. Federal, State or local procedures. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

8. Special Protection Information

Respiratory Protection: None needed under normal circumstances of use. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134) and equivalent U.S. State standards. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. Federal OSHA's Respiratory Protection Standard (1910. 134-1998) or the regulations of various U.S. States.

Ventilation: Use adequate ventilation to ensure exposure levels are maintained below the limits. Use local exhaust ventilation. Normal office ventilation conforming to the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) standards is adequate under normal circumstances of use. Persons using this product should consult a qualified Ventilation Engineer and/or Industrial Hygienist if concerns about exposures arise. If necessary, refer to Australian National Code of Practice for the Control of Workplace Hazardous Substances (NOHSC: 2007 (1994) for further information. As with all products that contain chemicals, ensure proper decontamination equipment (eyewash/safety shower stations) are available near areas where this product is used as necessary.

Skin/Body Protection: Wear butyl rubber gloves for routine use to prevent staining. Check gloves for leaks. If necessary refer to U.S. OSHA 29 CFR 1910.138. Use body protection for appropriate task *rubber apron when cleaning equipment, Tyvek suite and rubber boots during non-incidental spill response.). If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where the employee's feet may be exposed to electrical hazardous, use foot protections, as described in U.S. OSHA 29 CFR 1910.136.

Eye Protection: None needed under normal circumstances of use. Splash goggles or safety glasses should be worn during operation in which sprays of liquid may occur. If necessary, refer to U.S. OSHA 29 CFR 1910.133.
Work/Hygienic Practices: As with all chemicals, avoid getting this product on you or in you. Wash thoroughly after handling this product. Do not eat, drink or smoke or apply cosmetics, while handling this product.

9. Toxicological Information

Suspected Cancer Agent: The remaining components of this product are not found on the following lists: Federal OSHA Z list, NTP, IARC, and CAL/Osha and therefore are not considered to be, nor suspected to be, a cancer-causing agent by these agencies.

Irritancy of Product: Skin contact will be moderately irritating. Contact with the eyes will be irritating and may cause temporary visual impairment.

Sensitization of the Product: The component of this product are not known to be sensitizers with prolonged or repeated use.

Reproductive Toxicity Information: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: The components of this product are not reported to produce mutagenic effects in humans. Human mutation data are available for the Glycerin component of this product; these data were obtained during clinical studies on specific human tissues exposed to high doses of this compound.

Embryotoxicity: The components of this product are not reported to produce embryotoxic effects in humans.

Teratogenicity: The components of this product are not reported to cause teratogenic effects in humans. Reproductive Toxicity: The components of this product are not reported to cause reproductive effects in humans.

10. Ecological Information

Environmental stability: This product is relatively stable under ambient environmental conditions.

Effect of Material on Plants or Animals: This product may be harmful to aquatic plant or animal life, especially if large volumes of this product are released. Plants may be discolored or damaged (depending on the severity of the contamination).

Effect of Chemical on Aquatic Life: This product may be harmful to aquatic plant or animal life, especially if large volumes of this product are released into a body of water.

11. Transportation Information

This product is not hazardous as defined by 49 CFR 172.101 by the U.S. Department of Transportation.

Proper Shipping Name: Not regulated.

Hazardous Class Number and Description: Not Applicable.

UN Identification Number: Not Applicable.

Packing Group: Not Applicable.

Dot Label(s) Required: Not Applicable.


Marine Pollutant: No component of this product is designated by the DOT to be a marine pollutant (per Appendix B to 49 CFR 172.101).

Transport Canada, Transportation of Dangerous Goods Regulations: This product is not considered as dangerous goods per the regulations of Transport Canada.

International Air Transport Association Shipping Information: This product is not considered as dangerous goods by the International Air Transport Association.

International Maritime Organization Shipping Information: This product is not considered as dangerous goods by the International Maritime Organization.

European Agreement Concerning the International Carriage of Dangerous Goods by Road: This product is not considered as dangerous goods by the United Nations Economic Commission for Europe to be dangerous goods.
Australian Federal office of Road Safety Code for the Transportation of Dangerous Goods by Road or Rail: This product is not considered as dangerous goods, per regulations of the Federal Office of Road Safety.

12. Regulatory Information

Additional United States Regulations:

U.S. SARA Reporting Requirements: The components of this product are subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Acts as follows:

- U.S. SARA Threshold Planning Quantity: There are no specific threshold planning quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000lb may apply, per 40 CFR 370.20.
- U.S. CERCLA Reportable Quantity: Not applicable.
- U.S. TSCA Inventory Status: All components of this product are in compliance with the requirements of the U.S. Toxic Substances Control Act and are either listed on or are exempt from listing on the inventory. For certain polymeric substances, the Polymer Exemption cited at 40 CFR 723.250 may apply.
- U.S. Hazardous Air Pollutant: The components of this product are not listed by the EPA under section 112b of the Clean Air Act as HAPs. These components are not listed in 40 CFR 68.130 as being subject to EPA's accidental release provision 112r of 40 CFR Part 68 and have a threshold quantity assigned under this regulation.
- California Safe Drinking Water and Toxic Enforcement Act (Prop 65): Warning. This product contains a trace chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

ANSI Labeling (Z129.1). Caution! May cause skin and eye irritation. Inhalation and ingestion may be harmful. May cause central nervous system effects. May discolor contaminated skin, eyes, hair and clothes. For industrial use only. Keep out of reach of Children. Use with adequate ventilation. Avoid contact of liquid with skin, eyes and clothing. Avoid exposure to vapors, mists, or sprays. Wash thoroughly after handling. Wear appropriate hand and eye protection. First Aid: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. If inhaled, remove to fresh air. If swallowed, do not induce vomiting. Get medical attention if irritation devlops or persists or if any other adverse effect occurs. In case of fire: Use water fog, dry chemical or CO2, or alcohol foam. In case of spill: Absorb spill with inert materials (polypads, dry sand). Rinse area with soapy water. Consult Material Safety Data Sheet for additional information.

Notice to Reader

The information contained in this MSDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider Inc. urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this MSDS.