Safety Data Sheet

Section 1 : Identification of substance and company undertaking

1.1 Product identifier: WASTE INK from S50670/S70670
1.2 Relevant substance use: Printers Utilizing Epson SureColor S50670/S70670 Printing Inks
1.3 Supplier details
   Distributor: Epson America, Inc.
   Address: 3840 Kilroy Airport Way
             Long Beach, CA  90806
             United States
   Telephone: 562.276.1369
   FAX: 562.997.5799
1.4 Emergency telephone number: 562.276.1369

Section 2 : Hazard identification

2.1 GHS classification: SKIN CORROSION/IRRITATION; Hazard category 2
2.2 Label elements

   Symbols:

   Signal word: Warning

   Hazard statements: Causes skin irritation. Combustible liquid.

   Precautionary statements: Wash hands thoroughly after handling.
                            Wear protective gloves/protective clothing/eye protection/face protection.
                            IF ON SKIN: Wash with plenty of soap and water.
                            If skin irritation occurs: Get medical advice/attention.
                            Take off contaminated clothing and wash before reuse.
                            Keep away from open flames/hot surfaces. No smoking.
                            In case of fire: Use alcohol resistant foam for extinction.
                            Store in a well-ventilated place. Keep cool.
                            Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Section 3 : Composition/information on ingredients

Substance/Mixture : Mixture (ink composition)

<table>
<thead>
<tr>
<th>Ink Composition</th>
<th>CAS No.</th>
<th>% By Weight</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene glycol diethyl ether</td>
<td>112-36-7</td>
<td>50 - 65</td>
<td>none</td>
</tr>
<tr>
<td>Diethylene glycol methyl ethyl ether</td>
<td>1002-67-1</td>
<td>10 - 25</td>
<td>none</td>
</tr>
<tr>
<td>γ - Butyrolatone</td>
<td>96-48-0</td>
<td>10 - 15</td>
<td>none</td>
</tr>
<tr>
<td>Proprietary organic materials</td>
<td>-</td>
<td>1 - 15</td>
<td>none</td>
</tr>
<tr>
<td>Proprietary dyes and pigments*</td>
<td>-</td>
<td>1 - 3</td>
<td>none</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&lt;2</td>
<td>none</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>&lt;1</td>
<td>none</td>
</tr>
</tbody>
</table>

(*) Copper content less than 3,400 ppm

Section 4 : First aid measures

4.1 Description of measures

Eyes : Immediately flush with room temperature, low pressure, clean water for at least 15 minutes. Seek medical attention if irritation continues.

Skin : IF ON SKIN : Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

Inhalation : Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.

Ingestion : Seek medical advice, and attention if stomach continues to be upset. IF SWALLOWED, do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed: Ink contact with skin may cause irritation, swelling, or redness.

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

Suitable media : Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.

Unsuitable media : None

5.2 Special hazards from mixture : None

5.3 Firefighters : Use PPE, avoid a leeward position.
Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures
   
   Non-emergency personnel: Eye and skin protection required during clean-up. Use proper ventilation.
   
   Emergency responders: None

6.2 Environmental precautions: Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up
   
   Spill containment: Use sponges to wipe-up ink.
   Spill clean-up: Rinse area with damp cloth. Place waste in closed container for disposal.
                  Wash hands with soap and water.
   
   Other information: Do not dispose of waste to sewer.

6.4 Reference to other sections: Please refer to Section 13 for disposal.

Section 7 : Handling and storage

7.1 Precautions for safe handling
   
   Recommendations: Use proper ventilation and no fire in work place.
                      Keep out of reach of children and do not drink ink.
                      Do not dismantle cartridge.
   
   Occupation hygiene: Avoid contact with skin, eyes, and clothing.
                       In the case of skin contact, wash with soap and water.

7.2 Safe storage: Do not store cartridges in high or freezing temperatures.
                 Keep cartridges out of direct sunlight.
                 Do not store cartridges with oxidizing agents or explosives.
                 Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

Section 8 : Exposure controls / personnel protection

8.1 Control parameters: Diethylene glycol diethyl ether (CAS No. 112-36-7)
                       California OELs (CCOR, Title 8, Section 5155, Airborne Contaminants)
                       The 8-Hour TWA Exposure Value is 5 ppm or 33 mg/m³

8.2 Exposure controls
   
   Engineering controls: Proper ventilation
   
   Personal protection: Personal protective equipment is not required under suitable use.
                      If there is a possibility of ink exposure, wear protective gloves, clothing, eye, and face protection.
                      Respiratory protection is not required under suitable use.
                      Thermal hazards are not known under suitable use.

   Environmental exposure controls: Not established
Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Multi-colored liquid
Odor : Slight
Odor threshold : No data available
pH : 8.0 - 9.0
Melting point : Less than 0°C
Freezing point : Less than 0°C
Initial boiling point : No data available
Boiling range : No data available
Flash point : 75.0°C (closed cup, ASTM D3278)
Evaporation rate : No data available
Flammability(solid/gas) : Not applicable (liquid)
Upper/lower
flammability : No data available
Upper/lower
explosive limits : 1.4 - 6.9v/v% as γ-Butyrolactone
Vapor pressure : No data available
Vapor density : Greater than 1 (air = 1)
Relative density : 0.96 at 20°C
Solubility(ies) : Soluble in water
Partition coefficient : N-octanol/water, no data available
Auto ignition temp : No data available
Decomposition temp : No data available
Viscosity : Less than 5 mPa-s at 20°C
Explosive properties : 1.4 - 6.9v/v% as γ-Butyrolactone
Oxidizing properties : None

Section 10 : Stability and reactivity

10.1 Reactivity : Stable under normal temperature and pressure
10.2 Chemical stability : Stable under normal temperature and pressure
10.3 Hazard reactions : None
10.4 Conditions to avoid : High and freezing temperatures
10.5 Incompatible materials : Oxidizers and explosives
10.6 Hazard decomposition : No data available

Section 11 : Toxicological information

11.1 Toxicological effects

Acute toxicity Oral LD$_{50}$ : >2500 mg/kg (rats)
Acute toxicity Dermal LD$_{50}$ : >2000 mg/kg (rats)
Mutagenicity : No data available
Carcinogenicity : With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this ink cartridge, emissions to air of carbon black during normal printing use have not been found. IARC, the International Agency for research on Cancer, has found printing inks to be not classifiable as human carcinogens as group 3.

Titanium dioxide is classified a "possible carcinogen to human" (Group 2B) in animal chronic inhalation studies. In animal chronic inhalation studies, tumor formation observed only in rats, is attributed to "lung overloading", a generic response to excessive dust amounts retained in the lungs for a prolonged period. Use of this product, as intended, does not result in excessive dust inhalation. Epidemiological study to date has not revealed evidence of the relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.

Reproduction toxicity : No data available

Section 12 : Ecological information

12.1 Toxicity : No data available
12.2 Persistence and degradability : No data available
12.3 Bio accumulative potential : No data available
12.4 Mobility in soil : No data available
12.5 PBT and vPvB assessment : No data available
12.6 Other adverse effects : No data available

Section 13 : Disposal considerations

13.1 Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.
**Section 14 : Transportation information**

14.1 UN number : NA 1993  
14.2 Proper shipping name : Waste combustible liquid, n.o.s.  
14.3 Transport hazard class : Combustible liquid  
14.4 Packing group : III  
14.5 Environmental hazards : Regulated as a Class 3 Combustible Liquid by DOT, IMO, and IATA  
14.6 Special precautions : No label codes  
14.7 Bulk transport Annex II of MARPOL 73/78 and IBC Code : Not applicable

**Section 15 : Regulation information (safety, health, and environmental)**

15.1 U.S. Information  

- **OSHA Inhalation Hazard** : Not Regulated (29 CFR 1910.1000(d)(1)(i))  
- **TSCA Sec. 4(a) Final Test Rules** : Not Regulated  
- **TSCA Sec. 5 SNUR** : Proposed  
  - **Ingredient**: DEGDEE (CAS# 112-36-7)  
  - **Reference**: 76FR40850  
- **TSCA Sec. 8(a) PAIR** : Not Regulated  
- **TSCA Sec. 12(b) 1-time Export** : Regulated  
  - **Ingredient**: DEGDEE (CAS# 112-36-7)  
  - **Reference**: TSCA 5 Proposed SNUR  
- **Clean Air Act Sec. 112 HAP** : DEGDEE (CAS# 112-36-7)  
  - **DEGMEE (1002-67-1)**  
- **EPCRA Sec. 313 (SARA Title III)** : DEGDEE (CAS# 112-36-7)  
  - **DEGMEE (1002-67-1)**  
- **NFPA Hazard Rating** : Health(1), Flammability(2), Instability/Reactivity(0), Other(0)  
- **HMIS Hazard Rating** : Health(1), Flammability(2), Instability/Reactivity(0), PPE (D)  
- **California Proposition 65** : Toluene (CAS# 108-88-3) as <0.03% by weight of proprietary organic materials

15.2 Canada Information :  
- **WHMIS Controlled Product** : Not applicable (manufactured article)

15.3 Chemical safety assessment : Chemical safety assessment on ink has not been conducted

**Section 16 : Other information**

This SDS adheres to U.S. regulatory requirements and standards and may not meet the regulatory requirements in other locations.  
This is a revised Safety Data Sheet which replaces all prior U.S. SDS for this substance.  
This "Safety Data Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or uses and disposal information which may accompany the substance.  
The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. Epson does not warrant the completeness or accuracy of the information contained herein. It is subject to revision from time to time.

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