I. PRODUCT IDENTIFICATION

Manufacturer: Gans Ink and Supply Co, Inc.
Address: 1441 Boyd Street
Los Angeles, CA 90033
Emergency phone: (323) 264-2200

HMIS HAZARD IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>B</td>
</tr>
</tbody>
</table>

Product Class: UV-Cure Lithographic Printing Ink

Manufacturer’s code: Various, UV13251 – 54, UV13531, UV14595-97, UV14892, UV13562, UV15162, UV13531, etc.

Trade Name: UV Cardcure Inks

II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Material Description</th>
<th>CAS #</th>
<th>%</th>
<th>Exposure Limits</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neopentylglycol Propoxylated Diacrylate</td>
<td>84170-74-1</td>
<td>6</td>
<td>Not Established</td>
<td></td>
</tr>
<tr>
<td>Hexamethylene Diacrylate</td>
<td>13048-33-4</td>
<td>3 - 4</td>
<td>Not Established</td>
<td></td>
</tr>
<tr>
<td>Acrylates, mixtures</td>
<td>Not available</td>
<td>4 - 34</td>
<td>Not Established</td>
<td></td>
</tr>
<tr>
<td>Proprietary Resin Mixtures</td>
<td>Not available</td>
<td>0 - 6</td>
<td>Not Established</td>
<td></td>
</tr>
<tr>
<td>Photoinitiators, mixtures</td>
<td>Not available</td>
<td>2 - 8</td>
<td>Not Established</td>
<td></td>
</tr>
</tbody>
</table>

III. HEALTH HAZARD INFORMATION

Effects of Overexposure

Inhalation: Not expected to be a hazard due to low volatility under standard conditions. Inhalation of mist or vapor may cause irritation or respiratory tract. Symptoms of irritation may include coughing, mucous production and shortness of breath.

Skin Contact: Avoid skin contact. Contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Prolonged contact may cause blister formations (burns). Since irritation may not occur immediately, contact can go unnoticed. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. This condition may make the skin more susceptible to other irritants, sensitizers, and disease.

Eye Contact: Avoid eye contact. This product may cause severe eye irritation. Can cause burning sensation, tearing, swelling, and redness. Injury may persist for several days.

Ingestion: Do not ingest. May irritate the mouth, throat, and gastrointestinal tract. Severe oral intoxication will lead to intense burning of the throat and may result in drowsiness, dullness, numbness, and headache followed by dizziness, weakness, and nausea. Loss of consciousness and convulsions followed by death may result. See Notes to Physician section below.

IV. FIRST AID PROCEDURES

Emergency & First Aid Procedures

Eyes: Immediately flush eyes with large amounts of water and continue flushing for 15- 30 minutes. Retract eyelids often. Seek emergency medical attention.
Skin: Immediately remove contaminated clothing. Wash contaminated area thoroughly with soap and water. Flush with lukewarm water for 15 minutes. If redness or irritation occurs, seek medical attention.

Inhalation: If overcome by exposure, remove victim to fresh air immediately. If breathing has stopped or is irregular, administer artificial respiration and supply oxygen if it is available. If victim is unconscious, seek immediate medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Notes to Physician: Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage, and may be fatal. Signs of lung involvement include increased respiration rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time if aspiration. Gastrointestinal discomfort may develop, followed by vomiting, with risk of aspiration.

V. FIRE AND EXPLOSION DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point °F</td>
<td>&gt; 200 F</td>
</tr>
<tr>
<td>Auto-ignition Temperature °F</td>
<td>No Data</td>
</tr>
<tr>
<td>Flammable Limits in Air (%)</td>
<td></td>
</tr>
<tr>
<td>Lower Limit</td>
<td>No Data</td>
</tr>
<tr>
<td>Upper Limit</td>
<td>No Data</td>
</tr>
</tbody>
</table>

Extinguishing Media: Use water fog, water spray, foam, CO₂, or dry chemical extinguishing media.

Special Fire Fighting Procedures: Do not enter fire area without proper protection. Fight fire from a safe distance. Remove all ignition sources. Wear self-contained breathing apparatus and complete personal protective equipment when entering confined areas. Water may be ineffective in firefighting due to low solubility. Use water spray or fog for cooling.

Unusual Fire & Explosion Hazard: High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat / pressure. Closed containers may rupture or explode during runaway polymerization. Dense smoke may be generated while burning; carbon dioxide, carbon monoxide, and other oxides may be generated as products of combustion.

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Remove all ignition sources, as spilled material may polymerize. Move leaking containers to ventilated area. Ensure adequate ventilation. Wear protective equipment during clean-up. Stop discharge, if it can be performed safely, and contain material. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Place in a suitable container for disposal. Wash spill area with a strong detergent and water solution; rinse with water, contain and minimize water use during clean-up. Keep spill water from entering drains. Do NOT flush to sewer. Advise water authority if spillage has entered into water course or drainage system.

VII. HANDLING AND STORAGE

Handling and Storage: Store in containers in a cool, well-ventilated area. Do Not store above 38 °C/ 100 °F or excessive cold temperatures, 0 °C/ 32 F. Store in tightly closed containers away from heat, sparks, open flame, sources of ignition. Avoid exposure to ultraviolet light and/or sunlight. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor. Always wash hands and face with soap and water after handling.

Other Precautions: For industrial use only. Do not ingest. Consumption of food and beverages should be avoided in work areas. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specific exposure or flammable limits.

Personal Protective Equipment
**Respirator:** Respiratory protection is not required under conditions of normal use. If vapor or mist in generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

**Skin:** Protective Neoprene gloves are recommended.

**Eye:** Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face or splash-proof safety goggles.

### IX. PHYSICAL AND CHEMICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range °F</td>
<td>212 F</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Relative Density (H₂O = 1)</td>
<td>1.12 – 1.26</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 68°F)</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Material Density Lbs./Gal</td>
<td>9.33– 10.49</td>
</tr>
<tr>
<td>% Volatiles by Weight</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>% Solids by Weight</td>
<td>99</td>
</tr>
<tr>
<td>VOC: lbs/gal</td>
<td>0.1 g/L</td>
</tr>
<tr>
<td>Appearance/Odor</td>
<td>Colored paste</td>
</tr>
</tbody>
</table>

### X. STABILITY AND REACTIVITY INFORMATION

**Stability (Thermal, Light, etc.):** Stable under normal circumstances.

**Conditions to avoid:** Excessive heat 38 °C/ 100 °F, excessive cold 0 °C/ 32 F, sources of ignition. Direct sunlight and ultraviolet light.

**Hazardous Polymerization:** High temperatures (>38 C/ 100°F) and oxygen deficient atmosphere reduce inhibitor effectiveness and may cause polymerization, raising the temperature and pressure, possible rupturing the container. Do NOT blanket or mix with nitrogen or other inert gases as this renders the inhibitor ineffective.

**Materials to avoid:** Strong oxidizing agents, strong reducers. Avoid free radical initiators including peroxides, acids, inert gases and alkalies.

**Hazardous Decomposition Products:** CO₂, CO, and other oxides may be generated as products of combustion.

### XI. TOXICOLOGICAL INFORMATION

**CARCINOGEN:** This product has not been identified as a carcinogen by OSHA or the National Toxicology Program (NTP), or the International Agency for Research on Cancer (IARC).

**Mutagen:** No Data

**Teratogen:** No Data

**Reproductive Toxicity:** No Data

**Ingredient:** Polyol Acrylate 1.2 %
- Oral rat LD₅₀ > 2000 mg/kg
- Skin rabbit LD₅₀ > 2000 mg/kg

### XII. ECOLOGICAL INFORMATION

This product has not been evaluated at this time.

**Ingredient:** Polyol Acrylate 1.2 %
- Fish 96H LC₅₀ 1 -10 mg/l

As with all chemicals, DO NOT allow to enter waterways, drains etc.

### XIII. DISPOSAL INFORMATION

**Waste Disposal Method:** If recycling as ink is not possible, material may be incinerated or land filled at a licensed facility in accordance with local, state, and federal regulations.

### XIV. TRANSPORT INFORMATION

**Flammability Classification:**

- OSHA: Class III B
- DOT Shipping Name: Not Regulated
- DOT Hazard Class: Not Regulated
IMO/IMDG: Not Regulated
IATA/ICAO: Not Regulated
Canadian TDG: Not Regulated

Not classified as dangerous in the meaning of transport regulations.

XV. REGULATORY INFORMATION

SARA Title III Section 313:
This material DOES NOT contain a chemical subject to the reporting requirements of the SARA Superfund Amendments and Reauthorization Act.

Section 311/312 – Hazard Categories: Pursuant to Section 311/312 of SARA Title III, the physical and health hazard categories for this product are identified below:
Fire Hazard – NO
Sudden Release of Pressure Hazard – NO
Reactivity Hazard – YES
Immediate (acute) Health Hazard – YES
Delayed (chronic) Health Hazard – YES.

TSCA Section 8(b) Inventory Status:
All component(s) of this product are either exempt or listed on the TSCA Inventory.

International Inventory

TSCA Section 12 (b): Ingredients comply
Canada (DSL): Ingredients comply
Europe (EINECS): Ingredients comply
Australia (AICS): Not included on Inventory
Korea (KECL): Ingredients comply
Japan (ENCS): Ingredients comply
China (CECS): Ingredients comply
Philippines (PICCS): Not included on inventory

U.S. State Regulations

California Proposition 65:
This product contains, or may contain trace amounts of a chemical known by the state of California to cause cancer and/or reproductive harm.

Chemical

Toluene, Trace Amount.

XVI. OTHER INFORMATION

The information herein is presented in good faith, based on the data available to us and is believed to be correct as of the date hereof. However, Gans Ink and Supply Co., Inc. makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Gans Ink and Supply Co., Inc. assumes no responsibility for any damages of any nature directly or indirectly resulting from the use of or reliance upon the information contained herein. Users must make their own determination as to the suitability of the product for their purpose prior to use. In accordance with good practices of personal cleanliness and hygiene, handle with due care and avoid unnecessary contact with this product.