Safety Data Sheet

SECTION 1: IDENTIFICATION
SDS Number: 518, version 2-7-19

(a) Product identifier
Gans Item ID: UV12139, UV12148, UV12198, UV12264, UV12368, UV12425, UV14683, UV14800, UV15685


(b) Other means of identification
General description: Lithographic printing inks and overprint varnish, UV-cure

(c) Recommended use
Product Use: Industrial use only
Restrictions on use: Not for residential use.

(d) Supplier’s details
Manufacturer: Gans Ink and Supply Co, Inc.
Address: 1441 Boyd Street
          Los Angeles, CA 90033
Contact Person: Marco Ramos
Telephone: 323-264-2200 x139
Email: MSDS@gansink.com

e) Emergency telephone numbers:
Chemical spill or physical hazard: Contact the Local Emergency Response Agency 9-1-1, or the Local Fire Department
Ingestion or health hazard: Contact the National Capital Poison Center, Poison Control: 800 222-1222; Poison.org

SECTION 2: HAZARD(S) IDENTIFICATION

(a) Classification
- This mixture is hazardous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Physical hazards: Not Classified
- Health hazards:
  - Skin Corrosion – Category 1
  - Eye Damage/Irritation – Category 1
  - Sensitization, Skin – Category 1
  - Toxic to Reproduction – Category 2
  - Specific Target Organ Toxicity, Single Exposure – Category 3
  - Hazardous to the Aquatic Environment, Chronic – Category 2
(b) Label elements
Signal Word: Danger

Hazard Statements: Causes severe skin burns and eye damage; Causes serious eye damage; May cause an allergic skin reaction; Suspected of damaging fertility or the unborn child; May cause respiratory irritation; Toxic to the environment with long lasting effects.

Precautionary Statements:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection.

Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated areas thoroughly after handling.

Avoid release to the environment

Response: If exposed or concerned: Get medical advice/attention.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If exposed or concerned: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.
IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to disposal recycling center. Waste management should be in full compliance with federal, state and local laws.

Hazard Pictograms:

(c) Hazards not otherwise classified
None known

(d) Ingredients of unknown acute toxicity
NA
### SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture  
**TS = Trade Secret (as specified by substance manufacturer)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS # (TS = trade secret)</th>
<th>Conc. min. (wt. %)</th>
<th>Conc. max. (wt. %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene diacrylate</td>
<td>13048-33-4</td>
<td>9.8%</td>
<td>51.0%</td>
</tr>
<tr>
<td>Gans UVO-1045</td>
<td>TS</td>
<td>0.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Polyester acrylate</td>
<td>TS</td>
<td>0.0%</td>
<td>13.0%</td>
</tr>
<tr>
<td>2-[[2,2-bis[(1-oxoallyl)oxy]methyl]butoxy[methyl]-2-ethyl-1,3-propanediyl diacrylate</td>
<td>94108-97-1</td>
<td>0.0%</td>
<td>13.0%</td>
</tr>
<tr>
<td>4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid</td>
<td>55818-57-0</td>
<td>0.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2-propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]</td>
<td>72162-39-1</td>
<td>0.0%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Esterification product of poly[oxy(methyl-1,2-ethanediyl)].alpha.,alpha.'(2,2-dimethyl-1,3-propanediyl)bis[omega.-hydroxy- and prop-2-enolic acid]</td>
<td>84170-74-1</td>
<td>0.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>52408-84-1</td>
<td>0.0%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Gans UVP-2005</td>
<td>TS</td>
<td>0.0%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Glycerol propoxylate triacrylate</td>
<td>TS</td>
<td>0.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Pentaerythritol, ethoxylated, esters with acrylic acid</td>
<td>51728-26-8</td>
<td>0.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Gans UVP-2002</td>
<td>TS</td>
<td>0.0%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Monomer</td>
<td>TS</td>
<td>0.0%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Polyester Acrylate</td>
<td>TS</td>
<td>0.0%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Gans UVP-2013</td>
<td>TS</td>
<td>0.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Reactive tertiary amine</td>
<td>TS</td>
<td>0.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Gans UVP-2035</td>
<td>TS</td>
<td>0.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Gans UVP-2007</td>
<td>TS</td>
<td>0.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Epoxy acrylated oligomer</td>
<td>TS</td>
<td>0.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</td>
<td>162881-26-7</td>
<td>0.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td>2-ethylhexanoic acid</td>
<td>149-57-5</td>
<td>0.0%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Acrylated resin</td>
<td>TS</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>2-hydroxyethyl acrylate</td>
<td>818-61-1</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium</td>
<td>15305-07-4</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

### SECTION 4: FIRST AID MEASURES

(a) **Description of first aid measures:**

**Inhalation:** Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.

**Skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Ingestion: Rinse mouth. Do NOT induce vomiting. If exposed or concerned: Get medical advice/attention.

(b) Most important symptoms and effects, both acute and delayed:

Ingestion: Suspected of damaging fertility or the unborn child
Inhalation: May cause respiratory irritation.
Skin contact: Causes severe skin burns and eye damage; May cause an allergic skin reaction
Eye contact: Causes serious eye damage. Causes severe skin burns and eye damage.

(c) Indication of any immediate medical attention and special treatment needed:
Symptoms such as burning or pain to eyes or skin may indicate exposure and the need for first aid.

SECTION 5: FIRE – FIGHTING MEASURES

(a) Extinguishing Media:
Suitable extinguishing media: Use CO₂, dry chemical, fire-fighting foam, or water fog extinguishing media
Unsuitable extinguishing media: Do not use water stream. Water stream or spray is OK to cool unopened containers only.

(b) Special hazards arising from the substance or mixture: Thermal decomposition or combustion products may include COₓ, and NOₓ. High pressure my build up in heated containers.

(c) Special protective equipment and precautions for fire-fighters: Wear NIOSH approved self-contained respiratory protective device, and fully protective fire-fighting suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

(a.i) Personal precautions:
Wear protective gloves, protective clothing, eye protection, face protection. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated areas thoroughly after handling.

(a.ii) Protective equipment:
See Section 8

(a.iii) Emergency procedures:
If dangerous conditions exist, contact emergency response personnel, follow emergency procedures, and contact emergency response authorities.

(b) Methods for containment and cleaning up:
If it is safe to do so, adjust leaking containers to reduce or eliminate the continued release. Wear all Personal Protection listed in Section 8 before directly contacting spilled material. For high viscosity materials, scoop or shovel material into appropriate container for reuse, recycling, or disposal. For low viscosity materials, first surround and then cover spilled material with inert absorbent (vermiculite, or similar). Then scoop or shovel material into appropriate container for reuse, recycling, or disposal.

Residual material can be cleaned with UV blanket wash, acetone, or other press solvent. Consult your company's spill procedure for details of regulatory restrictions and recommendations. Do not allow spilled materials, or clean up materials to enter storm drains or natural water ways.
SECTION 7: HANDLING AND STORAGE

(a) Precautions for safe handling:
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection.

Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated areas thoroughly after handling.

(b) Conditions for safe storage:
Store locked up. Store in original container and keep containers covered and sealed. Store in cool, dry, well-ventilated place. Appropriate storage temperature is approximately 7° - 35° C (45° - 95° F).

Incompatibilities: Avoid contact with heat, sources of ignition, sunlight, and strong oxidizers.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

(a) Permissible exposure limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS #</th>
<th>ppm</th>
<th>mg/m³</th>
<th>8-hour TWA (ST) STEL (C) Ceiling</th>
<th>Up to 10-hour TWA (ST) STEL (C) Ceiling</th>
<th>8-hour TWA (ST) STEL (C) Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8-hour TWA (ST) STEL (C) Ceiling</td>
<td>Up to 10-hour TWA (ST) STEL (C) Ceiling</td>
<td>8-hour TWA (ST) STEL (C) Ceiling</td>
</tr>
</tbody>
</table>

No hazardous ingredients in this mixture appear on OSHA Annotated Tables Z-1, Z-2, or Z-3.

(b) Appropriate engineering controls:
Ventilation requirements: Adequate ventilation in accordance with good engineering practice must be provided.
General protective measures: Ensure that eye flushing/eye wash stations, and hand washing areas are accessible.

(c) Personal protective equipment:
Inhalation: Avoid breathing mist/vapors/spray. Where mist or aerosol is present, an organic vapor respirator is recommended.

Skin Contact: Wear protective gloves/protective clothing. Contaminated work clothing must not be allowed out of the workplace. Neoprene or nitrile gloves are recommended. PVC gloves are not compatible. Always wear long sleeves and where exposure potential is high, a neoprene or other chemical resistant apron is recommended.

Eye Contact: Wear eye protection/face protection. Eye and face protective devices must comply with ANSI Z87.1-1989. Recommended eye protection: goggles, flexible fitting, hooded ventilation. A transparent face shield is recommended.

Ingestion: Avoid eating, drinking, or smoking in work area and wash hands after handling this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance (physical state, color): Viscous paste or liquid, various colors
(b) Odor: acrylate
(c) Odor threshold: Data not available
(d) pH: Data not available
(e) Melting point/ freezing point: Data not available
(f) Initial Boiling point / Range: > 212 °F (> 100 °C)
(g) Flashpoint: > 212 °F (> 100 °C)
(h) Evaporation Rate: Data not available
(i) Flammability (solid/ gas): Not classified as flammable/ Not classified as flammable
(j) Upper/ lower flammability explosion limits: Data not available
(k) Vapor Pressure (mm Hg @ 68°F): Data not available
(l) Vapor Density (Air = 1): Data not available
(m) Relative Density (H2O = 1): Data not available
(n) Solubility: insoluble in water
(o) Partition coefficient n-Octanol/ Water: Data not available
(p) Auto-ignition temperature: Data not available
(q) Decomposition temperature: Data not available
(r) Viscosity: Data not available

Other properties
VOC % (wt): ≤ 1.0  VOC (lbs./gal): ≤ 0.08

SECTION 10: STABILITY AND REACTIVITY INFORMATION

(a) Reactivity: Not reactive under normal storage conditions. See Section 7. Mixture will undergo polymerization reaction in the presence of sunlight, bright industrial lights, or high temperatures.
(b) Chemical stability: Mixture is chemically stable under normal storage and handling conditions, and under normal temperatures and pressures.
(c) Possibility of hazardous reactions: Exposure to excess heat may cause exothermic polymerization reaction.
(d) Conditions to avoid: Avoid contact with heat (temperature > 100° F, 38° C), sources of ignition, sunlight, and strong oxidizers.
(e) Incompatible materials: Radical forming initiators, peroxides or other strong oxidizers, strong alkalies or reactive metals.
(f) Hazardous decomposition product: No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

(a) Likely routes of exposure: Skin contact, eye contact, inhalation, ingestion.
(b) Symptoms related to physical, chemical, and toxicological characteristics:
   Skin contact: There may be irritation and redness at site of contact. Causes severe skin burns and eye damage; May cause an allergic skin reaction;
   Eye contact: There may be irritation and redness. Eyes may water profusely. Causes serious eye damage;
   Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing. May cause respiratory irritation
   Ingestion: There may be irritation and redness of the mouth and throat, and a feeling of illness.
(c) Delayed and immediate effects, and chronic effects from long-term exposure
   Suspected of damaging fertility or the unborn child; May cause respiratory irritation
(d) Numerical measures of toxicity, acute:

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS # (TS= trade secret)</th>
<th>Oral</th>
<th>Inhalation</th>
<th>Dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene diacrylate</td>
<td>13048-33-4</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LCO (7 h) 410 mg/m³ air (rat)</td>
<td>LD50 3 650 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Substance</td>
<td>CAS # (TS= trade secret)</td>
<td>Oral</td>
<td>Inhalation</td>
<td>Dermal</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------</td>
<td>------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>2-[2,2-bis[(1-oxoallyl)oxy]ethyl]malononitrile</td>
<td>94108-97-1</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Esterfication product of poly(oxy(methyl-1,2-…</td>
<td>5818-57-0</td>
<td>LD50 2000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD0 2000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>52408-84-1</td>
<td>LD50 2000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Glycerol propoxylate triacrylate</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>2-propenoic acid</td>
<td>72162-39-1</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Pentaerythritol, ethoxylated, esters with acrylic acid</td>
<td>51729-26-8</td>
<td>LD50 2000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 2000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Gans UVP-2002</td>
<td>TS</td>
<td>LD50 1340 - 2756 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 2000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Monomer</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Gans UVO-1045</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Polyester Acrylate</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Gans UVP-2013</td>
<td>TS</td>
<td>LD50 1470 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Reactive tertiary amine</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Gans UVP-2035</td>
<td>TS</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 2 000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Gans UVP-2007</td>
<td>TS</td>
<td>LD50 1694 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 6929 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Epoxy acrylated oligomer</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine</td>
<td>162881-26-7</td>
<td>LD50 2000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>2-ethylhexanoic acid</td>
<td>149-57-5</td>
<td>LD50 2043 mg/kg bw (rat)</td>
<td>LC0 (8 h) 110 mg/m³ air (rat)</td>
<td>LD50 2000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Acrylated resin</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Tris(N-hydroxy-N-nitrosophenylaminato---…</td>
<td>15305-07-4</td>
<td>LD50 cut-off 500 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>2-hydroxyethyl acrylate</td>
<td>818-61-1</td>
<td>LD50 540 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 1 000 mg/kg bw (rat)</td>
</tr>
</tbody>
</table>

(e) Carcinogens information:
IARC, Group 1 (Carcinogenic to humans), Group 2A (Probably carcinogenic to humans), or Group 2B (Possibly carcinogenic to humans): This mixture does not contain listed materials.
NTP, 13th Report on Carcinogens: This mixture does not contain listed materials
OSHA: This mixture does not contain listed materials

SECTION 12: ECOLOGICAL INFORMATION

(a) Ecotoxicity
Classification of mixture: Hazardous to the Aquatic Environment, Chronic – Category 2
(b) Persistence and degradability: No data available
(c) Bioaccumulative potential: No data available.
(d) Mobility in soil: No data available
(e) Other adverse effects: No known adverse effects
SECTION 13: DISPOSAL CONSIDERATIONS
Dispose of contents/container in accordance with local/regional/national regulations. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: TRANSPORT INFORMATION

US DOT (Ground):
(a) UN number: UN3082
(b) UN Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
(c) Transport hazard class: 9
(d) Packing Group: PG III
(e) Environmental hazards: Marine Pollutant
(f) Transport in bulk
   MARPOL 73/78: No data available
   IBC: No data available.
(g) Special Precautions: None known

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations
TSCA Section 8(b) Inventory Status: All ingredients in this mixture are listed on the TSCA Chemical Inventory, or are not required to be listed.
EPCRA, Section 302 – Extremely hazardous substances: This mixture does not contain listed materials.
CERCLA Hazardous Substances: This mixture does not contain listed materials.
EPCRA Section 313 Toxic Chemicals: This mixture does not contain listed materials.
CAA 112(r) Regulated Chemicals for Accidental Release Prevention: This mixture does not contain listed materials.
   Hazardous Air Pollutants (HAP): This mixture does not contain listed materials.

U.S. State Regulations
Pennsylvania Right to Know:
   o 2-hydroxyethyl acrylate CAS 818-61-1
New Jersey Right to Know:
   o 2-ethylhexanoic acid CAS 149-57-5
   o 2-hydroxyethyl acrylate CAS 818-61-1
California Proposition 65: This mixture does not contain listed materials.
Canadian Environmental Protection Act:
WHMIS Classification: No data available

European Chemical Agency (ECHA)
Candidate List of Substances of Very High Concern (SoVHC), including 27 June 2018 update: This mixture does not contain listed materials.

SECTION 16: 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.