Safety Data Sheet

SECTION 1: IDENTIFICATION

SDS Number: UVS-5001, version 10/30/2018

(a) Product identifier
Gans Item ID: UVS-5001

Gans Description: UV OPV Imprint for Plastic

(b) Other means of identification
General description: UV-cure overprint varnish

(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 as hazardous

Health hazards:
- Skin Irritation – Category 2
- Eye Damage/Irritation – Category 1
- Sensitization, Skin – Category 1A, 1B
- Specific Target Organ Toxicity, Single Exposure, respiratory – Category 3

(b) Label elements

Signal Word: Danger
**Hazard Statements:** Causes skin irritation; Causes serious eye damage; May cause an allergic skin reaction; May cause respiratory irritation;

**Precautionary Statements:**
Prevention: Wear eye protection/face protection. Wear protective gloves.

Avoid breathing fume/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash contaminated areas thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN OR HAIR: Wash with plenty of water and mild soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

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

**Hazard Pictograms:**

![Hazard Pictogram]

(c) Hazards not otherwise classified
None known

(d) Ingredients of unknown acute toxicity
None known

**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>4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid</td>
<td>55818-57-0</td>
<td>50.0%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Polyester Acrylate</td>
<td>TS</td>
<td>15.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate</td>
<td>42978-66-5</td>
<td>5.0%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

(a) Description of first aid measures:
Ingestion: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician.
Inhalation: Remove person to fresh air and keep comfortable for breathing.
Skin contact: Wash with plenty of water and mild soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(b) Most important symptoms and effects, both acute and delayed:
Ingestion: Data not available; not classified as hazardous
Inhalation: May cause respiratory irritation;
Skin contact: Causes skin irritation; May cause an allergic skin reaction;
Eye contact: Causes serious eye damage;

(c) Indication of any immediate medical attention and special treatment needed:
Symptoms such as loss of breath, and burning, pain, or irritation to lungs, 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: High temperatures, or exposure to radiation or oxidizers may cause spontaneous, exothermic polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.

(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 eye protection/face protection. Wear protective gloves. Ensure adequate ventilation. Avoid breathing fume/mist/ vapors/spray. Wash contaminated areas thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

(a.ii) Protective equipment: See Section 8.

(a.iii) Emergency procedures: Follow your company emergency response procedures.

(b) Methods for containment and cleaning up:
Dike and contain spill. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. If needed, clean spill area with fast-drying press cleaning solvent.
SECTION 7: HANDLING AND STORAGE

(a) Precautions for safe handling: Wear eye protection/face protection. Wear protective gloves. Avoid breathing fume/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash contaminated areas thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

(b) Conditions for safe storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Incompatibilities: Polymerization initiators, including peroxides, strong oxidizing agents, strong reducers, free radical initiators, oxygen scavengers, copper, copper alloys, carbon steel, iron, rust, nickel, cobalt, strong bases, ultraviolet light and/or sunlight.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

(a) Permissible exposure limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>Cal/OSHA PEL</th>
<th>NIOSH REL</th>
<th>ACGIH 2015 TVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hazardous ingredients in this mixture appear on OSHA Annotated Tables Z-1, Z-2, or Z-3</td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
<td>8-hour TWA (ST) STEL (C) Ceiling</td>
<td>Up to 10-hour TWA (ST) STEL (C) Ceiling</td>
</tr>
</tbody>
</table>

(b) Appropriate engineering controls:
Ventilation requirements: Handle only in a place equipped with local exhaust (or other appropriate exhaust). Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

General protective measures: Ensure that eye flushing/eye wash stations, and hand washing areas are accessible.

(c) Personal protective equipment:
Inhalation: Avoid breathing fume/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Where mist or aerosol is present, an organic vapor full facepiece respirator is recommended (to protect eyes and face as well).

Skin Contact: Wear protective gloves. Wash contaminated areas thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Neoprene or nitrile gloves are recommended. PVC gloves are not compatible.


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 liquid, colorless
(b) Odor: Acrylic
(c) Odor threshold: Data not available
(d) pH: NA
(e) Melting point/ freezing point: Data not available
(f) Initial Boiling point / Range: > 300 °F (> 149 °C)
(g) Flashpoint: > 200 °F (> 93 °C)
(h) Evaporation Rate: Slower than butyl acetate
(i) Flammability (solid/ gas): Data not available
(j) Upper/ lower flammability explosion limits: Data not available
(k) Vapor Pressure (mm Hg @ 68°F): Data not available
(l) Vapor Density (Air = 1): Heavier than air
(m) Relative Density (H2O = 1): > 1.0
(n) Solubility: Data not available
(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

SECTION 10: STABILITY AND REACTIVITY INFORMATION

(a) Reactivity: Not reactive under normal storage conditions; polymerization reaction caused by exposure to light and heat.
(b) Chemical stability: Mixture is chemically stable under normal storage and handling conditions, and under normal temperatures and pressures; polymerization reaction caused by exposure to light and heat.
(c) Possibility of hazardous reactions: No hazardous reactions when store and handled according to instructions.
(d) Conditions to avoid: High temperatures, localized heat sources (i.e. drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing, and inert gases, storage > 140°F, loss of dissolved air, loss of polymerization inhibitor, contamination with incompatible materials.
(e) Incompatible materials: Polymerization initiators, including peroxides, strong oxidizing agents, strong reducers, free radical initiators, oxygen scavengers, copper, copper alloys, carbon steel, iron, rust, nickel, cobalt, strong bases, ultraviolet light and/or sunlight.
(f) Hazardous decomposition product: Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

SECTION 11: TOXICOLOGICAL INFORMATION

(a) Likely routes of exposure: Skin contact, eye contact, inhalation, and ingestion.

(b) Symptoms related to physical, chemical, and toxicological characteristics:
Skin contact: Causes skin irritation; May cause an allergic skin reaction;
Eye contact: Causes serious eye damage;
Inhalation: May cause respiratory irritation;
Ingestion: Data not available; not classified as hazardous

(c) Delayed and immediate effects, and chronic effects from long-term exposure
May cause an allergic skin reaction;
(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>4,4'-Isopropylidenediphenol, ...</td>
<td>55818-57-0</td>
<td>LD0 2000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD0 2000 mg/kg bw (rat)</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>(1-methyl-1,2-ethanediyl)bis...</td>
<td>42978-66-5</td>
<td>LD50 2000 - 5000 mg/kg bw (rat)</td>
<td>LC0 (7 h) 545 - 410 000 µg/m³ air (rat)</td>
<td>LD50 2000 - 3650 mg/kg bw (rabbit)</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) by IARC: 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: Not classified as hazardous
(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): Not regulated as a dangerous good
(a) UN number: Not regulated as a dangerous good
(b) UN Proper Shipping Name: Not regulated as a dangerous good
(c) Transport hazard class: Not regulated as a dangerous good
(d) Packing Group: Not regulated as a dangerous good
(e) Environmental hazards: Not regulated as a dangerous good
(f) Transport in bulk
   MARPOL 73/78: Not regulated as a dangerous good
   IBC: Not regulated as a dangerous good.
(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

California Proposition 65: This mixture does not contain listed materials.
New Jersey Right to Know: This mixture does not contain listed materials.
Oregon DEQ List of Air Toxic Contaminants: This mixture does not contain listed materials.
Pennsylvania Right to Know: 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.