SECTION 1: IDENTIFICATION

SDS Number: 631, version 1/25/2019

(a) Product identifier
Gans Item ID: X102588, X102999, X102672, X102757, X102656, X102657

Gans Description: OS Reflective Watermark White, OS Rflctv Wtrmrk W/Flur Green, OS Rflctv Wtrmrk W/Flur Yellow, OS Rflctv Wtrmrk W/Fluor Blue, OS Coin Reactive Ink, OS Coin Reactive W/Fluor Blue

(b) Other means of identification
General description: Lithographic printing ink

(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:
  - Eye Damage/Irritation – Category 2B
  - Germ Cell Mutagenicity – Category 1B
  - Carcinogenicity – Category 1B
  - Toxic to Reproduction – Category 2
Environmental hazards:
- Hazardous to the Aquatic Environment, Acute – Category 1
- Hazardous to the Aquatic Environment, Chronic – Category 1

(b) Label elements

Signal Word: Danger

Hazard Statements: Causes eye irritation; May cause cancer; Suspected of causing genetic defects; Suspected of damaging fertility or the unborn child; Very toxic to aquatic life; Very toxic to aquatic life 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. Wash contaminated areas thoroughly after handling.

Avoid release to the environment.

Response:
IF EXPOSED OR CONCERNED: 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.

Collect spillage.

Storage: 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:

(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>Zinc oxide</td>
<td>1314-13-2</td>
<td>0.0%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>0.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Fatty acid ester</td>
<td>TS</td>
<td>0.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Distillates (petroleum), sweetened middle</td>
<td>64741-86-2</td>
<td>0.0%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>0.0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2-(2-methoxyethoxy)ethanol</td>
<td>111-77-3</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

(a) Description of first aid measures:
Inhalation: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing.
Skin contact: Gently wash with plenty of water and soap. 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.
Ingestion: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician.

(b) Most important symptoms and effects, both acute and delayed:
Ingestion: May cause cancer; Suspected of causing genetic defects; Suspected of damaging fertility or the unborn child;
Inhalation: Data not available.
Skin contact: Data not available.
Eye contact: Causes eye irritation

(c) Indication of any immediate medical attention and special treatment needed:
Symptoms such as burning, pain, or irritation to eyes 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: None known

(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:
Use personal protective equipment. Avoid contact with skin, eye or clothing.

(a.ii) Protective equipment: See Section 8 for details
(a.iii) **Emergency procedures:** Follow your company emergency response procedure.

(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.

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.
Wash hands and contaminated areas thoroughly after handling.

(b) **Conditions for safe storage:**
Store locked up.

**Incompatibilities:** Keep away from strong oxidizing agents.

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>Zinc oxide (fume)</td>
<td>1314-13-2</td>
<td>ppm 5</td>
<td>5 mg/m³ (ST) 10 mg/m³</td>
<td>5 mg/m³ (ST) 10 mg/m³</td>
<td>2 mg/m³ (resp)(ST) 10 mg/m³ (resp)</td>
</tr>
</tbody>
</table>

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

(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:** 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, and protective clothing. Contaminated work clothing must not be allowed out of the workplace. Ansell Chemical Resistance Guide, 8th Edition recommends the following glove materials for similar chemistry: Sol-Vex, nitrile

**Eye Contact:** Wear eye protection, and face protection. Eye and face protective devices must comply with ANSI Z87.1-1989. Recommended eye protection: full face shield.

**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/paste, translucent to opaque white
(b) Odor: Oleoresinous
(c) Odor threshold: Data not available
(d) pH: NA
(e) Melting point/ freezing point; Data not available
(f) Initial Boiling point / Range: Data not available
(g) Flashpoint: >212 °F (>100 °C)
(h) Evaporation Rate: Data not available
(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): Data not available
(m) Relative Density (H₂O = 1): 2.32 average
(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.): 7.4 average
VOC: 1.43 lbs./gal; 162 g/L

SECTION 10: STABILITY AND REACTIVITY INFORMATION

(a) Reactivity: Not reactive under normal storage conditions. See Section 7.
(b) Chemical stability: Mixture is chemically stable under normal storage and handling conditions, and under normal temperatures and pressures.
(c) Possibility of hazardous reactions: No data available
(d) Conditions to avoid: Keep away from open flames, or strong oxidizers.
(e) Incompatible materials: Strong oxidizers.
(f) Hazardous decomposition product: Thermal decomposition may yield carbon dioxide and/or carbon monoxide.

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 eye irritation;
Eye contact: Data not available
Inhalation: Data not available
Ingestion: May cause cancer; Suspected of causing genetic defects; Suspected of damaging fertility or the unborn child;

(c) Delayed and immediate effects, and chronic effects from long-term exposure
May cause cancer; Suspected of causing genetic defects; Suspected of damaging fertility or the unborn child:
(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>Zinc oxide</td>
<td>1314-13-2</td>
<td>LD50 2000 - 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 1.79 - 5.7 mg/L air (rat)</td>
<td>LD50 2000 mg/kg bw (rat)</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 2.18 - 5.53 mg/L air (rat)</td>
<td>LD50 2000 - 5000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Fatty acid ester</td>
<td>TS</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Distillates (petroleum), sweetened middle</td>
<td>64741-86-2</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 1.72 - 4.6 mg/L air (rat)</td>
<td>Data not available</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>2-(2-methoxyethoxy)ethanol</td>
<td>111-77-3</td>
<td>LD50 7128 - 8188 mg/kg bw (mouse)</td>
<td>LC0 (6 h) 1.2 mg/L air (rat)</td>
<td>LD50 9404 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:
  o Hazardous to the Aquatic Environment, Acute – Category 1
  o Hazardous to the Aquatic Environment, Chronic – Category 1

(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:
   o 2-(2-methoxyethoxy)ethanol CAS 111-77-3

EPCRA Section 313 Toxic Chemicals:
   o 2-(2-methoxyethoxy)ethanol CAS 111-77-3, N230

CA 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:
   o Zinc oxide CAS 1314-13-2

Oregon DEQ List of Air Toxic Contaminants:
   o Zinc oxide CAS 1314-13-2
   o 2-(2-methoxyethoxy)ethanol CAS 111-77-3

Pennsylvania Right to Know:
   o Zinc oxide CAS 1314-13-2
   o 2-(2-methoxyethoxy)ethanol CAS 111-77-3

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.