Safety Data Sheet

SECTION 1: IDENTIFICATION

SDS Number: S-1802, version 1/28/2016

(a) Product identifier
Gans Item ID: S-1802, S-1802D, S-1802G, S-1802P, S-1802Q

Gans Description: Gans Lithofount 91Z

(b) Other means of identification
General description: Lithographic fountain solution concentrate

(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 number:
Available only during business hours.
(323) 264-2200 Monday- Friday 7:00 A.M.– 9:00 P.M.
24 Hours Response: Los Angeles County Fire Department / HazMat. Department

SECTION 2: HAZARD(S) IDENTIFICATION

(a) Classification
This mixture is hazardous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).
Physiological hazards: Not classified as hazardous

Health hazards:
  o Skin Irritation Category 2
  o Eye Irritation Category 2A
  o Respiratory Sensitization Category 1
  o Carcinogenicity Category 1B
  o Reproductive Toxicity Category 1B
  o Specific Target Organ Toxicity, repeated exposure Category 2 (Kidney)
(b) Label elements

Signal Word: Danger

Hazard Statements: Causes skin irritation; Causes serious eye irritation; May cause allergy or asthma symptoms or breathing difficulties if inhaled; May cause cancer; May damage fertility or the unborn child; H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.

Precautionary Statements:
Prevention: Obtain special instructions before use; Do not handle until all safety precautions have been read and understood; Do not breathe mist/ vapors/ spray; Wash skin thoroughly after handling; Wear eye protection/ face protection; Wear protective gloves; Use personal protective equipment as required; In case of inadequate ventilation wear respiratory protection.

Response:
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. If eye irritation persists: Get medical advice/ attention.
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: Store locked up.
Disposal: Dispose of contents/ container to an approved waste disposal plant.

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>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1-octylpyrrolidine-2-one</td>
<td>2687-94-7</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Cobalt Nitrate</td>
<td>10141-05-6</td>
<td>0.1</td>
<td>1</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

(a) Description of first aid measures:
Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Skin contact: Remove contaminated clothing. Wash thoroughly with soap and water for at least 20 min. or until material is removed. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.

Eye contact: If easy to do, remove contact lens, if worn. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice.

Ingestion: Do NOT induce vomiting. Gently wipe or rinse the inside of the mouth with water. Obtain medical attention.

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

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause damage to organs (Kidney) through prolonged or repeated exposure.

Skin contact: Causes skin irritation

Eye contact: Causes serious eye irritation

(c) Indication of any immediate medical attention and special treatment needed:
Symptoms such as dizziness or loss of breath, and 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: 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:
Ensure adequate ventilation. Use personal protective equipment.

(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:
Soak up with inert absorbent material.

SECTION 7: HANDLING AND STORAGE

(a) Precautions for safe handling:
Wear protective gloves.
Wear eye protection or face protection.
Wash hands thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace.
Avoid breathing mist/ vapors/spray.

(b) Conditions for safe storage:
Keep container tightly closed in a dry and well-ventilated place.

Incompatibilities: Keep away from oxidizing agents and strongly acid or alkaline materials.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>(a) Exposure data</th>
<th>OSHA PEL</th>
<th>Cal/OSHA PEL</th>
<th>NIOSH REL</th>
<th>ACGIH 2015 TVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>CAS #</td>
<td>ppm</td>
<td>mg/m³</td>
<td>8-hour TWA (ST)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL (C) Ceiling</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>50</td>
<td>240</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td></td>
<td></td>
<td>C (Aerosol only) 100 mg/m³</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>10</td>
<td>25</td>
<td>10 ppm, 25 mg/m³; ST 15 ppm, 37 mg/m³</td>
</tr>
<tr>
<td>Cobalt Nitrate</td>
<td>10141-05-6</td>
<td></td>
<td></td>
<td>0.02 mg/m³ (Cobalt)</td>
</tr>
</tbody>
</table>

(b) Appropriate engineering controls:
Ventilation requirements: Handle only in a place equipped with local exhaust (or other appropriate exhaust).
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. Ansell Chemical Resistance Guide, 7th Edition recommends the following glove materials for 2-Butoxyethanol (Butyl Cellosolve), ethylene glycol, and 1-octylpyrrolidine-2-one together: Laminate film, Natural Rubber, and possibly Neoprene.


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): Liquid (aqueous solution), green color
(b) Odor: Sweet
(c) Odor threshold: Data not available
(d) pH: 4-5
(e) Melting point/ freezing point; Data not available
(f) Initial Boiling point / Range: > 200.1 °F (> 93.4 °C)
(g) Flashpoint: > 200.1 °F (> 93.4 °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): 1.045 (68 °F (20 °C))
(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: < 14 mm²/s (104 °F (40 °C))

Other properties
VOC % (wt.): 35.7
VOC (lbs./gal): 3.08

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, hot surfaces and sources of ignition.
(e) Incompatible materials: Acids and bases.
(f) Hazardous decomposition product: No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(b) Symptoms related to physical, chemical, and toxicological characteristics:
   Skin contact: There may be irritation and redness at site of contact.
   Eye contact: There may be irritation and redness. Eyes may water profusely.
   Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.
   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
No data available
(d) Numerical measures of toxicity:

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS # (TS= trade secret)</th>
<th>Dermal</th>
<th>Oral</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product as sold</td>
<td>NA</td>
<td>Acute toxicity estimate: &gt; 5,000 mg/kg Method: Calculation</td>
<td>Acute toxicity estimate: 2,425 mg/kg Method: Calculation</td>
<td>Acute toxicity estimate: 26,499 ppm Exposure time: 4 h Test atmosphere: gas Method: Calculation</td>
</tr>
</tbody>
</table>

(e) Carcinogens information:
IARC: Cobalt Nitrate CAS 10141-05-6, Carcinogenic Group 2A; Probably carcinogenic to humans.
NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 12: ECOLOGICAL INFORMATION

(a) Ecotoxicity
Classification of mixture: No data available
(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 applicable for product as supplied.
   IBC: Not applicable for product as supplied.
(g) Special Precautions: None known

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Section 8(b) Inventory Status: All ingredients of this mixture are listed on the TSCA Inventory
EPCRA, Section 302 – Extremely hazardous substances: This mixture does not contain listed materials.
CERCLA Hazardous Substances: Calculated RQ exceeds reasonably attainable upper limit.
EPCRA Section 313 Toxic Chemicals:
   o 2-Butoxyethanol 111-76-2
   o Ethylene glycol 107-21-1
   o Cobalt Nitrate 10141-05-6
CAA 112(r) Regulated Chemicals for Accidental Release Prevention: This mixture does not contain listed materials.
Hazardous Air Pollutants (HAP):
   o Ethylene glycol 107-21-1

U.S. State Regulations
Massachusetts Right To Know:
   o 2-Butoxyethanol 111-76-2
   o Ethylene glycol 107-21-1
   o Acetic acid 64-19-7
Pennsylvania Right To Know
   o 2-Butoxyethanol 111-76-2
   o 1,2-Propanediol 57-55-6
   o Ethylene glycol 107-21-1
   o Acetic acid 64-19-7
   o Sodium sulfate 7757-82-6
New Jersey Right To Know
   o 2-Butoxyethanol 111-76-2
   o 1,2-Propanediol 57-55-6
   o Ethylene glycol 107-21-1
   o Acetic acid 64-19-7
   o Cobalt Nitrate 10141-05-6
California Proposition 65: This mixture does not contain listed materials.

Canadian Environmental Protection Act:
WHMIS Classification : D2B: Toxic Material Causing Other Toxic Effects

European Chemical Agency (ECHA): No data available

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.