Safety Data Sheet

SECTION 1: IDENTIFICATION

SDS Number: S-1807, version 5/11/2016

(a) Product identifier

Gans Description:  Gans Diamond Etch AWFS

(b) Other means of identification
General description: Lithographic press 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).
  - Physical hazards:  Not Classified
  - Health hazards:
    - Skin Irritation – Category 2
    - Eye Damage/Irritation – Category 2A

(b) Label elements
Signal Word:  Warning
Hazard Statements: Causes skin irritation. Causes serious eye irritation.

Precautionary Statements:
Prevention:
Wash contaminated areas thoroughly after handling. Wear protective gloves. Wear eye protection/face protection.

Response:
IF ON SKIN (OR HAIR): Wash with plenty of water and 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.

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>ethylene glycol</td>
<td>107-21-1</td>
<td>5.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>5.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Ammonium nitrate</td>
<td>6484-52-2</td>
<td>1.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Malic acid</td>
<td>6915-15-7</td>
<td>1.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>1-octyl-2-pyrrolidone</td>
<td>2687-94-7</td>
<td>1.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Sodium xylenesulphonate</td>
<td>1300-72-7</td>
<td>1.0%</td>
<td>5.0%</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: Wash with plenty of water and 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.

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: Not classified as hazardous
Inhalation: Not classified as hazardous.
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 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: Data not available

(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. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

(a.ii) Protective equipment: Positive pressure, full-face, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

(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:
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:
Wear protective gloves.
Wear eye protection or face protection.
Wash contaminated areas thoroughly after handling.

(b) Conditions for safe storage:
Keep container tightly closed in a dry and well-ventilated place. Do not freeze. Ideal storage temperature is 50-90 °F (10-32 °C).

Incompatibilities: Keep away from strong oxidizing agents, and strongly acid or alkaline materials.
SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

(a) Exposure data

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS #</th>
<th>ppm</th>
<th>mg/m$^3$</th>
<th>8-hour TWA (ST) Ceiling</th>
<th>Up to 10-hour TWA (ST) Ceiling</th>
<th>8-hour STEL (C) Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>50</td>
<td>240</td>
<td>20 ppm</td>
<td>5 ppm</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

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

(b) Appropriate engineering controls:

Ventilation requirements: 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: Wear protective gloves. Wear eye protection/face protection.

Inhalation: Avoid breathing mist/ vapors/spray.

Skin Contact: Wear protective gloves. Recommended: Ansell Solvex Nitrile, or similar.


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, green color
(b) Odor: slightly sweet
(c) Odor threshold: Data not available
(d) pH: 3.5 – 4.5
(e) Melting point/ freezing point; Data not available
(f) Initial Boiling point / Range: > 200° F (> 93.3° C)
(g) Flashpoint: > 200° F (> 93.3° 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 (H$_2$O = 1): 1.056
(n) Solubility: Miscible with 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: < 14 mm$^2$/s @ 104 °F (40 °C)
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: Strong acids and bases
(d) Conditions to avoid: Keep away from open flames, sparks, hot surfaces and sources of ignition.
(e) Incompatible materials: Strong oxidizers, strong acids and bases
(f) Hazardous decomposition product: Data not 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.
   Eye contact: There may be irritation and redness. Eyes may water profusely.
   Inhalation: Data not available
   Ingestion: Data not available

(c) Delayed and immediate effects, and chronic effects from long-term exposure
   - Data not available

(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>ethylene glycol</td>
<td>107-21-1</td>
<td>LD50 7712 mg/kg bw (rat)</td>
<td>LC50 (6 h) 2.5 mg/L air (rat)</td>
<td>LD50 3500 mg/kg bw (mouse)</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>LD50 1414 mg/kg bw (guinea pig)</td>
<td>LC0 (7 h) 400 ppm (guinea pig)</td>
<td>LD0 2000 mg/kg bw (guinea pig)</td>
</tr>
<tr>
<td>Ammonium nitrate</td>
<td>6484-52-2</td>
<td>LD50 2 950 mg/kg bw (rat)</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
<tr>
<td>Malic acid</td>
<td>6915-15-7</td>
<td>LD50 3 500 mg/kg bw (rat)</td>
<td>LC50 (4 h) 1.306 mg/L air (rat)</td>
<td>LD50 20 000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>1-octyl-2-pyrrolidone</td>
<td>2687-94-7</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
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<td>1300-72-7</td>
<td>Data not available</td>
<td>Data not available</td>
<td>Data not available</td>
</tr>
</tbody>
</table>

(e) Carcinogens information:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as Group 1 (Carcinogenic to humans), Group 2A (Probably carcinogenic to humans), or Group 2B (Possibly carcinogenic to humans) by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP (13th Report on Carcinogens).

OSHA: No component of this product present 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: 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):
(a) UN number: Not regulated as a hazardous

(b) UN Proper Shipping Name: Not regulated as a hazardous

(c) Transport hazard class: Not regulated as a hazardous

(d) Packing Group: Not regulated as a hazardous

(e) Environmental hazards: Not regulated as a hazardous good

(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 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:
- ethylene glycol CAS 107-21-1: RQ = 5000

EPCRA Section 313 Toxic Chemicals:
- ethylene glycol CAS 107-21-1

CAA 112(r) Regulated Chemicals for Accidental Release Prevention: This mixture does not contain listed materials.

Hazardous Air Pollutants (HAP):
U.S. State Regulations

Pennsylvania Right to Know
  o  ethylene glycol CAS 107-21-1
  o  2-butoxyethanol CAS 111-76-2
  o  Ammonium nitrate CAS 6484-52-2

New Jersey Right to Know
  o  ethylene glycol CAS 107-21-1
  o  2-butoxyethanol CAS 111-76-2
  o  Ammonium nitrate CAS 6484-52-2

Oregon DEQ List of Air Toxic Contaminants:
  o  ethylene glycol CAS 107-21-1, DEQ Sequence 234
  o  2-butoxyethanol CAS 111-76-2, DEQ Sequence 267
  o  Ammonium nitrate CAS 6484-52-2, DEQ Sequence 28

California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm:
  o  ethylene glycol CAS 107-21-1

Canadian Environmental Protection Act:
WHMIS Classification: No data available

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.