I. PRODUCT IDENTIFICATION

Manufacturer: Gans Ink and Supply Co, Inc.
Address: 1441 Boyd Street
Los Angeles, CA 90033
Emergency phone: (323) 264-2200

HMIS HAZARD IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Product Class: Lithographic Silver Ink

Trade Name: OS Brilliant Silver

Manufacturer’s code: A134765

II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS #</th>
<th>% Exposure Limits</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, Petroleum, Acid-treated Middle</td>
<td>64742-13-8</td>
<td>10 – 20</td>
<td>OSHA/PEL 5 mg/m3 mist</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH/TLV 5 mg/m3 mist</td>
</tr>
<tr>
<td>Hydrotreated Paraffinic based oil</td>
<td>64742-46-7</td>
<td>10 – 20</td>
<td>OSHA/PEL 5 mg/m3 mist</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH/TLV 5 mg/m3 mist</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>2.5 – 10</td>
<td>OSHA/PEL 15mg/m3 TWA (total dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA/TLV 5mg/m3 (respirable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH TLV/TLV 10 mg/m3 (metal dust)</td>
</tr>
</tbody>
</table>

III. HEALTH HAZARD INFORMATION

Effects of Overexposure

Inhalation: Avoid inhalation. Target Organs: respiratory system. Acute overexposure may result in irritation of the throat and lungs. This product may cause irritation to the respiratory system and mucous membranes. Prolonged exposure may cause chronic effects.

Skin Contact: Avoid skin contact. Target Organs: Skin. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. This condition may make the skin more susceptible to other irritants, sensitizers, and disease. Pre-existing skin conditions may make the skin more susceptible and facilitate uptake by this route.

Eye Contact: Avoid eye contact. Target Organs: Eyes. This product may be irritating to the eyes upon direct contact. Exposure to high concentrations of vapors may be irritating to the eyes. Prolonged exposure may cause chronic effects.

Ingestion: Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Liver and kidney injury may occur. Not a likely route of entry. See Notes to Physician section below.

IV. FIRST AID PROCEDURES

Emergency & First Aid Procedures

Eyes: Immediately flush eyes with large amounts of water and continue flushing for 15 minutes until irritation subsides. If irritation persists, seek medical attention.
Skin: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention.

Inhalation: Remove victim from exposure. If breathing has stopped or is irregular, administer artificial respiration and supply oxygen if it is available. If victim is unconscious, remove to fresh air and seek medical attention.

Ingestion: Do not induce vomiting without medical advice. Seek immediate medical attention. Never give anything by mouth to an unconscious person. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Notes to Physician. Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage, and may be fatal. Signs of lung involvement include increased respiration rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time of aspiration. Gastrointestinal discomfort may develop, followed by vomiting, with risk of aspiration.

V. FIRE AND EXPLOSION DATA

<table>
<thead>
<tr>
<th>Flash Point °F: 262.4 °F (128 ºC) (estimated)</th>
<th>Auto-ignition Temperature °F: 1112 °F (600 ºC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Limits in Air (% Lower Limit: No Data Upper Limit: No Data)</td>
<td></td>
</tr>
<tr>
<td>Extinguishing Media: Confining and smothering metal fires is preferable rather than applying water. Dry sand, sodium chloride powder, graphite powder or Met-L-X-powder</td>
<td></td>
</tr>
<tr>
<td>Unsuitable extinguishing media: Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment.</td>
<td></td>
</tr>
<tr>
<td>Special Fire Fighting Procedures: Fire fighters wear self contained breathing apparatus. Move containers from fire area if it can be done safely without risk. Do not allow to enter into sewers or ground water.</td>
<td></td>
</tr>
<tr>
<td>Unusual Fire &amp; Explosion Hazard: Fire may produce irritating, corrosive and / or toxic gases. Dense smoke may be generated while burning; carbon dioxide, carbon monoxide, and other oxides may be generated as products of combustion.</td>
<td></td>
</tr>
</tbody>
</table>

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Ensure adequate ventilation. Keep unnecessary personnel away. Remove all sources of ignition, heat or open flame. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb with earth, sand, vermiculite or other non-combustible material. Scrape up with trowel or scoop and place in a suitable container. Dispose of in accordance with state, local and Federal regulations. Prevent entry into waterways, sewers, drains etc.

VII. HANDLING AND STORAGE

Handling and Storage: Avoid prolonged exposure. Use this product with adequate ventilation. Store containers in a cool, dry, well-ventilated area. Keep away from all sources of ignition, flame and heat. The pressure in sealed containers can increase under the influence of heat. Do not breathe gas/ fumes, vapor or spray. Avoid contact with skin and eyes. When using, do not eat, drink or smoke. Always wash hands and face with soap and water before eating, drinking, and smoking. Keep away from oxidizing agents and flammable substances. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor.

Other Precautions: For industrial use only. Do not ingest. Always wash hands and face with soap and water before eating, drinking, and smoking. Consumption of food and beverages should be avoided in work areas where hydrocarbons are present.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: Adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specific exposure or flammable limits.

Personal Protective Equipment

Respirator: Respiratory protection is not required under conditions of normal use. If vapor or mist is
generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

**Skin:** Wear suitable and appropriate protective clothing and chemical resistant gloves over parts of the body subject to exposure. When using products, do not eat, drink or smoke. Wash hands after handling and before eating. Safety showers are recommended.

**Eye:** Eye protection is recommended. Wear plastic face shield or splash-proof safety glasses or goggles. Eyewash stations are recommended.

### IX. PHYSICAL AND CHEMICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range °F</td>
<td>525.2 °F (274 °C) calculated</td>
</tr>
<tr>
<td>Relative Density (H₂O = 1)</td>
<td>1.1 – 1.2</td>
</tr>
<tr>
<td>Material Density Lbs./Gal</td>
<td>9.16 – 10.0</td>
</tr>
<tr>
<td>% Volatiles by Weight (%)</td>
<td>30.0</td>
</tr>
<tr>
<td>VOC: lbs/gal</td>
<td>3.0 g/L</td>
</tr>
<tr>
<td>Appearance/Odor</td>
<td>Colored paste</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>No Data</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 68°F)</td>
<td>No Data</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

### X. STABILITY AND REACTIVITY INFORMATION

- **Stability (Thermal, Light, etc.):** Stable at normal conditions.
- **Conditions to avoid:** Excessive hot and cold temperatures. Sources of ignition, excessive heat flames and sparks.
- **Hazardous Polymerization:** Will not occur.
- **Materials to avoid:** Avoid acids, caustics and strong oxidizing agents.
- **Hazardous Decomposition Products:** CO₂, CO, and other oxides may be generated as products of combustion.

### XI. TOXICOLOGICAL INFORMATION

- **CARCINOGEN:** This product has not been identified as a carcinogen by OSHA or the National Toxicology Program (NTP), or the International Agency for Research on Cancer (IARC).
- **Mutagen:** No Data
- **Teratogen:** No Data
- **Reproductive Toxicity:** No Data

**Routes of Exposure**

- **Aluminum 7429-90-5**
  - Respiratory system, skin, eyes
- **Acute toxicity**
  - Oral LD₅₀: 20472.77 mg/kg, Rat, Oral
  - Acute LD₅₀: 12124.43 mg/kg, Rat, Dermal
  - Acute LD₅₀: 58 mg/L/4h estimated, Rat, Inhalation
- **Distillates Petroleum, Acid-treated Middle 64742-13-8**
  - Inhalation LC₅₀ Rat: 4.6 mg/L/4H
  - Oral LD₅₀ Rat: 740mg/kg
  - Dermal LD₅₀ Rabbit: >2000 mg/kg
- **Mineral Oil 64742-46-7**
  - Inhalation (Rat) LC₅₀ 4.6 mg/L/4H
  - Oral (Rat) LD₅₀: 7400 mg/kg
  - Dermal (Rabbit) LD₅₀: >2000 mg/kg

- **Epidemiology**
  - Not expected to be hazardous by OSHA criteria.
- **Reproductive toxicity**
  - Not expected to be hazardous by OSHA criteria.

### XII. ECOLOGICAL INFORMATION

- **Hydrotreated paraffinic based oil 64742-46-7**
  - LC₅₀ Fish: 35 mg/L 96.00 Hours
  - Aluminum 7429-90-5
LC50 Rainbow trout, Donaldson trout: Oncorhynchus mykiss: 0.12 mg/L 96.00 hours

Estimates for product may be based on additional component data not shown.

Persistence and degradability: Not available.

Components of this product have been identified as having potential environmental concerns.
As with all products and chemicals do not allow this product to enter sewers, drains or waterways.

XIII. DISPOSAL INFORMATION

Waste Disposal Method: If recycling as ink is not possible, material may be incinerated or land filled at a licensed facility in accordance with local, state, and federal regulations.
Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

XIV. TRANSPORT INFORMATION

Flammability Classification: Combustible
OSHA: Class III B
US DOT (Ground): Not Regulated as Hazardous goods
IATA (Air): Not Regulated as Hazardous goods
IMDG (Sea): Not Regulated as Hazardous goods

XV. REGULATORY INFORMATION

U.S. Federal Regulations

SARA Title III Section 313:
This material contains a chemical(s) subject to the reporting requirements of the SARA Superfund Amendments and Reauthorization Act.

Chemical CAS#
Aluminum 7429-90-5 1.0 % de minimis concentration (dust or fume only)

SARA (Superfund Amendments and Reauthorization Act of 1986) Title III:
SARA Section 302 - Extremely Hazardous Substances (EHS):
This product does not contain any components regulated under Section 302 (40 CFR 355) as EHS.

SARA Section 311/312 – Hazard Communication Standard (HCS):
SARA Section 311/312: Acute health hazard: No
Chronic health hazard No
Flammability hazard No
Pressure hazard No
Reactivity hazard No

SARA Section 304 – CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):
This product does not contain any components regulated under Section 304 (40 CFR 302) as hazardous chemicals for emergency release notification (“CERCLA” List).


TSCA Section 8(b) Inventory Status:
All components of this product are listed on the TSCA Inventory.

**International Regulations**

<table>
<thead>
<tr>
<th>Inventories</th>
<th>On Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (AICS) Australian Inventory of Chemical Substances</td>
<td>No</td>
</tr>
<tr>
<td>Canada (DSL) Domestic Substances List</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada (NDSL) Non-Domestic Substances List</td>
<td>No</td>
</tr>
<tr>
<td>China (IECCS) Inventory of Existing Chemical Substances in China</td>
<td>No</td>
</tr>
<tr>
<td>Europe (EINECS) European Inventory of New and Existing Chemicals</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe (ELINCS) European List of</td>
<td>No</td>
</tr>
<tr>
<td>Japan (ENCS) Japanese Inventory of</td>
<td>No</td>
</tr>
<tr>
<td>Existing and New Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>Korea (ECL) Existing Chemicals List</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines (PICCS) Philippine Inventory of Chemicals and Chemical Substance</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico Toxic Substance Control Act(TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A “Yes indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

**U.S. State Regulations**

**California Proposition 65:**
This product does Not contain any chemicals known by the state of California to cause cancer, birth defects and/or reproductive harm.

**US – Massachusetts Right- To – Know Substance**
Aluminum 7429-90-5 Listed

**U.S. – New Jersey- Right to Know Hazardous Substance List**
Aluminum 7429-90-5 500 LBS.

**U.S. - Pennsylvania- RTK (right to Know) List**
Aluminum 7429-90-5 Listed

**U.S. Rhode Island – Hazardous Substance List**
Aluminum 7429-90-5 Listed

**XVI. 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.