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

Product Class: Ink Additive

Trade Name: Organic Binder Compound

Manufacturer’s code: R-8003

II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS #</th>
<th>%</th>
<th>Exposure Limits</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Pyrrolidinone,</td>
<td>9003-39-8</td>
<td>95</td>
<td>OSHA PEL</td>
<td>Not Established</td>
</tr>
<tr>
<td>1-Ethenyl Homopolymer</td>
<td></td>
<td></td>
<td>ACGIH TLV</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Powdered material, may form explosive dust-air mixtures

III. HEALTH HAZARD INFORMATION

Effects of Overexposure

Inhalation: Not a hazard by inhalation, under normal conditions.

Skin Contact: Not a hazard under normal conditions.

Eye Contact: Not a hazard under normal conditions.

Ingestion: Not a hazard under normal conditions.

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. Launder clothing before reuse.

Inhalation: If fumes or dust exposure is generated when the material is heated or handled, 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. If conscious, give 2 glasses of water. Seek immediate medical attention.

V. FIRE AND EXPLOSION DATA

<table>
<thead>
<tr>
<th>Flash Point °F:</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not determined</td>
<td>No Data</td>
<td>No Data</td>
</tr>
</tbody>
</table>

Extinguishing Media: Use water fog, foam, CO₂, or dry chemical extinguishing media.

Special Fire Fighting Procedures: Fire fighters wear self-contained breathing apparatus and protective suit. Water can be used to cool containers exposed to heat or flame.
**Unusual Fire & Explosion Hazard:** Powdered material may form explosive dust-air mixtures. This material has an explosion hazard less than Pittsburg coal dust.

**VI. ACCIDENTAL RELEASE**

**Steps to be taken in event of spill or release:** Wear suitable protective equipment. Scrape up with trowel, scoop or vacuum and place in a suitable container. Minimize dust generation and accumulation. Dispose of in accordance with state local and Federal regulations.

**VII. HANDLING AND STORAGE**

**Handling and Storage:** Keep containers tightly closed when not in use. Minimize dust generation and accumulation. Avoid inhalation. Store in containers in a cool, dry, well-ventilated area, out of direct sunlight. Consumption of food and beverages should be avoided in work areas. Always wash hands and face with soap and water before eating, drinking, and smoking.

**Other Precautions:** For industrial use only. Do not ingest. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor.

**VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Ventilation Requirements:** Use only in well ventilated areas. Adequate ventilation in accordance with good engineering practice must be provided.

**Personal Protective Equipment**

- **Respirator:** Use only in well ventilated area.
- **Skin:** The use of impervious gloves is recommended.
- **Eye:** Eye protection is required under conditions of normal use. Wear plastic face shield or splash-proof safety glasses or goggles.

**IX. PHYSICAL AND CHEMICAL DATA**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range °F:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Density (Air = 1):</td>
<td>No Data</td>
</tr>
<tr>
<td>Relative Density (H₂O = 1):</td>
<td>0.3 – 0.4</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 68°F):</td>
<td>Not determined</td>
</tr>
<tr>
<td>Material Density Lbs./Gal:</td>
<td>2.50 – 3.33</td>
</tr>
<tr>
<td>% Solids by Weight:</td>
<td>100 pH: 3.0 – 7.0 (5% solution)</td>
</tr>
<tr>
<td>% Volatile Organic Compounds (VOC) by Weight</td>
<td>0</td>
</tr>
<tr>
<td>Appearance/Odor:</td>
<td>Off white powder</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Highly Soluble</td>
</tr>
<tr>
<td>VOC: lbs/gal:</td>
<td>0 g/L: 0</td>
</tr>
</tbody>
</table>

**X. STABILITY AND REACTIVITY INFORMATION**

<table>
<thead>
<tr>
<th>Stability (Thermal, Light, etc.):</th>
<th>Conditions to avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable under normal conditions.</td>
<td>Avoid excessive heat, sparks, open flame or hot surfaces.</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Materials to avoid:</td>
</tr>
<tr>
<td>Will not occur.</td>
<td>Strong oxidizers and strong reducing agents.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products:</td>
<td>Nitrogen oxides may be generated as products of combustion.</td>
</tr>
</tbody>
</table>

**XI. TOXICOLOGICAL INFORMATION**

**CARCINOGEN:** No components of this product present at levels greater than or equal to 0.1 % is identified as a known or anticipated carcinogen by OSHA, the National Toxicology Program (NTP), or the International Agency for Research Cancer (IARC).

- **Mutagen:** Not Listed
- **Teratogen:** No Listed
- **Reproductive Toxicity:** Not Listed

Acute Oral Toxicity: > 10,000 mg/kg (Rat0)
Eye Irritation: Non irritating to eye (Rabbit)
Skin Irritation: Non irritating (Human RIPT) Sensitization: Human RIPT, Non sensitizing
XII. ECOLOGICAL INFORMATION

Not readily biodegradable (11% in 28 days)

Ecotoxicity: Juvenile Turbot: 96-hr, LC50 > 1,000 mg/L
Corophium Volutator: 10-Day LC50 > 1,000 mg/L
Marine Algae; 72-hr. EC50 > 1,000 mg/L
Salmon; at up to 5% in the diet during smolt produced no signs of toxicity.
Salmon; at up to 5% in the diet for 112 days did not produce any signs of toxicity.

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.

XIV. TRANSPORT INFORMATION

DOT Hazard Classification (Non-Bulk): Not Regulated
DOT Shipping Name (Ground): Not Regulated
UN/NA Number: None
DOT Packing Group: None

DOT Hazard Classification (Bulk): Not Regulated
DOT Shipping Name (Ground): Not Regulated
UN/NA Number: None
DOT Packing Group: None

ICAO/ IATA Hazard Classification: Not Regulated
Proper Shipping Name (Air): Not Regulated
UN Number: None
IATA Packing Group: None

IMDG/ IMO Hazard Classification: Not Regulated
Proper Shipping Name (Sea): Not Regulated
UN/ID Number: None
IMDG Packing Group: None

TDG (Canada) Hazard Classification: Not Regulated
TDG Proper Shipping Name (Ground): Not Regulated

Not dangerous according to above specifications.

XV. REGULATORY INFORMATION

SARA Title III Section 313:
This material does Not contain chemicals subject to the reporting requirements of the SARA Superfund Amendments and Reauthorization Act.

TSCA Section 8(b) Inventory Status:
All component(s) of this product are either exempt or listed on the TSCA Inventory.

U.S. State Regulations
California Proposition 65:
This product does not contain any chemicals known by the state of California to cause cancer, birth and/or reproductive harm.

WHMIS Ingredient Disclosure List: None of the components of this product is listed on WHMIS Ingredient Disclosure List.
**Canada DSL Inventory List:** This product and / or its components are listed or exempt from the DSL Inventory.

**International Inventory Status:**

Europe (EINECS): This product and / or its components are listed or exempt from the EINECS Inventory.
Australia (AICS): This product and / or its components are listed or exempt from the AICS Inventory.
Japan (ENCS): This product and / or its components does Not comply with ENCS.
Canada (NDSL): This product and / or its components does Not comply with NDSL.
EU List of Notified Chemical Substances (ELINCS): This product and / or its components does Not comply with ELINCS.

**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.

**Safety Glasses**

**Gloves**