

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 border="1"> <tr><td>Health</td><td>3</td></tr> <tr><td>Flammability</td><td>1</td></tr> <tr><td>Reactivity</td><td>1</td></tr> <tr><td>Personal Protection</td><td>B</td></tr> </table>	Health	3	Flammability	1	Reactivity	1	Personal Protection	B
Health	3								
Flammability	1								
Reactivity	1								
Personal Protection	B								
Product Class: Specialty	Manufacturer's code: X101824								
Trade Name: Developing Pens / Fluid for S-1259									

II. HAZARDOUS INGREDIENTS

Material	CAS #	%	Exposure Limits	Units
Sodium Hydroxide	1310-73-2	2.5	OSHA / PEL CL 2 mg/m ³ ACGIH /TLV CL 2 mg / m ³	
Potassium Chloride	7447-40-7	4.5	N/A	
Ethylene Glycol	107-21-1	0.25	OSHA / PEL Not Established ACGIH / TLV ceiling 100 mg/m ³ , aerosol, A4	39.4 ppm
1,4- Dioxane	123-91-1	<0.01	OSHA / PEL Not Established ACGIH/ TLV ACGIH / TWA 8 HR. , skin	20 ppm A3

III. HEALTH HAZARD INFORMATION

Effects of Overexposure
Inhalation: Avoid inhalation. Slightly hazardous if inhaled. May cause upper respiratory tract irritation. resulting in irritation of throat and lungs. If heated or sprayed as an aerosol, inhalation of the spray mist can cause severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over- exposure can result in death.
Skin Contact: Avoid skin contact. This product is irritating to the skin upon direct contact. 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. This product irritating to the eyes upon direct contact. May cause eye damage. Inflammation of the eye is characterized by redness, watering, and itching. Exposure to high concentrations of vapors may be irritating to the eyes.
Ingestion: Do not ingest. Severe oral intoxication will lead to intense burning of the throat and may result in drowsiness, dullness, numbness, and headache followed by dizziness, weakness, and nausea. Loss of consciousness and convulsions followed by death may result. See <i>Notes to Physician</i> section below.

IV. FIRST AID PROCEDURES

Emergency & First Aid Procedures
Eyes: Check for and remove contact lenses. Immediately flush eyes with large amounts of water and

continue flushing for 15 minutes keeping eyelids open. Cold water may be used. Seek IMMEDIATE medical attention.
Skin: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. Cover irritated skin with an emollient. If redness or irritation occurs, seek IMMEDIATE medical attention.
Inhalation: If mist or 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 IMMEDIATE medical attention.
Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek IMMEDIATE medical attention.
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

Flash Point °F: 390 ° F		Auto-ignition Temperature °F: 698 ° F	
Flammable Limits in Air (% Volume)	Lower Limit: No Data	Upper Limit: No Data	
<p>Extinguishing Media: Use water fog, foam, CO₂, or dry chemical extinguishing media.</p> <p>Special Fire Fighting Procedures: Water may be used to cool containers exposed to heat or flame. Evacuate personnel to a safe area. Wear protective firefighting clothing. Burning liquids may be extinguished by dilution with water. Do not use direct water stream, will spread fire.</p> <p>Unusual Fire & Explosion Hazard: During a fire, smoke may contain the original material in addition to unidentified toxic and / or irritating compounds. Hazardous combustion products may include and are not limited to : Aldehydes, carbon dioxide and carbon monoxide.</p>			

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Cover and absorb with an inert dry material, sand, vermiculite etc. Scrape up with trowel or scoop and place in a suitable container. Clean up with a suitable solvent. Keep away from sewers, storm drains, surface water and soil.

VII. HANDLING AND STORAGE

Handling and Storage: Store in containers in a cool, well-ventilated area. Do not store below 64 F or above 130 F. Do not breathe fumes, vapor, spray or mist. Always wash hands and face with soap and water before eating, drinking, and smoking.
Other Precautions: For industrial use only. Do not ingest. Consumption of food and beverages should be avoided in work areas where hydrocarbons are present Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor.

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: For exposures, use impervious synthetic rubber clothing (boots, gloves, etc.) over parts of the body subject to exposure.
Eye: If material is handled such that it could be splashed into eyes, wear plastic face or splash-proof safety goggles.

IX. PHYSICAL AND CHEMICAL DATA

Boiling Range °F: 212 – 554 F	Vapor Density (Air = 1): > 1.2
Relative Density (H₂O = 1): 1.04	Vapor Pressure (mm Hg @ 70°F): 17.5
Material Density Lbs./Gal: 8.68	Solubility in Water: Soluble
% Volatiles by Weight: 0.1	
VOC: lbs/gal: 0.01 g/L: 1.0	Appearance/Odor: Clear liquid / no odor

X. STABILITY AND REACTIVITY INFORMATION

Stability (Thermal, Light, etc.): Stable	Conditions to avoid: Excessive heat and contact with strong oxidizers, such as sodium hypochlorite, hypochlorous acid.
Hazardous Polymerization: Will not occur.	Materials to avoid: Reactive with metals. Extremely corrosive with aluminum, slightly corrosive with stainless steel. in presence of moisture.
Hazardous Decomposition Products: CO ₂ , CO, and other oxides may be generated as products of combustion.	

XI. TOXICOLOGICAL INFORMATION

CARCINOGEN: The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.						
1, 4- Dioxane	123-91-1	0.01%	IARC 2B	NTP X	OSHA	ACGIH A3
This product contains small amounts of 1, 4- Dioxane. Exposure to large amounts of dioxane has been shown to cause cancer in rats, mice and guinea pigs.						
Mutagen:	No Data					
Teratogen:	No Data					
Reproductive Toxicity:	No Data					
Potassium Chloride 10 % (w/v) acute oral toxicity LD50: 15000 mg/kg, mouse, calculated value for the mixture.						
Sodium Hydroxide, 10 %: LD50: Not available. LC50: Not available						
Ethylene Glycol: skin absorption LD50: >20 mL/kg in rabbits. Oral LD50: 4000 mg/ kg in female rats.						
The product, at concentrations up to 25% is not a skin irritant or a skin sensitizer.						

XII. ECOLOGICAL INFORMATION

This product has not been evaluated at this time.

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.
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XIV. TRANSPORT INFORMATION

Flammability Classification:	
OSHA:	Class III B
DOT:	Not Regulated

XV. REGULATORY INFORMATION

SARA Title III Section 313: This material contains a chemical subject to the reporting requirements of the SARA Superfund

Amendments and Reauthorization Act.

<u>Chemical</u>	<u>CAS#</u>	<u>%</u>
Ethylene Glycol	107-21-1	0.25
1,4- Dioxane	123-91-1	0.01

TSCA Section 8(b) Inventory Status:

All component(s) of this product are either exempt or listed on the TSCA Inventory.

Clean Air Act - Hazardous Air Pollutants (HAP):

This product contains the following chemicals listed as HAP, as defined by the U.S. Clean Air Act Section 112 (40 CFR 61)

Ethylene Glycol	107-21-1	0.25
1,4- Dioxane	123-91-1	0.01

U.S. State Regulations

California Proposition 65:

This product contains a chemical known by the state of California to cause cancer and/or reproductive harm.

1,4- Dioxane	123-91-1	0.01
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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.