

Material Safety Data Sheet # 130
For Printing Inks and related Materials
OSHA Hazard Communication Standard, 29 CFR 1910.1200

Date of preparation: 5/14/90
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 MSDS #: 130

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>1</td></tr> <tr><td>Flammability</td><td>1</td></tr> <tr><td>Reactivity</td><td>0</td></tr> <tr><td>Personal Protection</td><td>B</td></tr> </table>	Health	1	Flammability	1	Reactivity	0	Personal Protection	B
Health	1								
Flammability	1								
Reactivity	0								
Personal Protection	B								
Product Class: Specialty	Manufacturer's code: S-1251, X101362								
Trade Name: Developing Pens/Fluid for Dry OS Pen Reactive Ink									

II. HAZARDOUS INGREDIENTS

Material	CAS #	%	Exposure Limits	Units
Potassium Iodide	7681-11-0	2.5	OSHA / PEL ACGIH/ TLV	Not Established Not Established
Citric Acid EC-No. 201-069-1	77-92-9	2.0	OSHA / PEL ACGIH/ TLV	Not Established Not Established
Bis (8-hydroxyquinolinium) sulphate EC-No. 205-137-1	134-31-6	0.1	OSHA / PEL ACGIH/ TLV	Not Established Not Established
polyalkyleneoxide modified Heptamethyltrisiloxane	27306-78-1	.09	OSHA / PEL ACGIH/ TLV	Not Established Not Established

III. HEALTH HAZARD INFORMATION

Effects of Overexposure
Inhalation: Avoid inhalation. May cause irritation to the respiratory tract. Prolonged and repeated overexposure may lead to respiratory irritation. Symptoms may include coughing and shortness of breath.
Skin Contact: Avoid skin contact. This product may be harmful if absorbed through the skin. May cause skin irritation. May be mildly irritating to skin after prolonged and repeated contact. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening.
Eye Contact: Avoid eye contact. This product may be mildly irritating to the eyes upon direct contact. May cause irritation with redness and pain.
Ingestion: Do not ingest. May be harmful if swallowed. Ingestion of small quantities is usually nonfatal unless aspiration occurs. Large quantities may cause irritation to the gastrointestinal tract. Chronic Exposure: Chronic Ingestion of iodides may produce "iodism" which may be manifested by skin rash, running nose, headache and irritation of the mucous membranes. Weakness, anemia, loss of weight and general depression may also occur.

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: 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 medical attention.
Ingestion: If patient is conscious, induce vomiting. Do not induce vomiting if patient is unconscious. Dilute by giving water. 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: 225 °F	Auto-ignition Temperature °F: 699 °F	
Flammable Limits in Air (% Volume)	Lower Limit: 2.6	Upper Limit: 12.5
Extinguishing Media: Use “alcohol” foam, water fog, CO ₂ , or dry chemical extinguishing media.		
Special Fire Fighting Procedures: Keep people away. Burning liquids may be extinguished by dilution with water. Do not use direct water stream; may spread fire. Water may be used to cool containers exposed to heat or flame.		
Unusual Fire & Explosion Hazard: None. During a fire smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide.		

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Contain spilled material if possible. Add absorbent material such as sand, dirt, vermiculite and place in a suitable container. Wash the spill area with large quantities of water. Prevent from entering into soil, ditches, sewers, waterways and / or groundwater.

VII. HANDLING AND STORAGE

Handling and Storage: Store liquid in dark, opaque plastic containers in a cool, dry, well-ventilated area. Store pens in re-sealable plastic bags. Store away from sources of ignition, heat or open flame. Store away from direct sunlight or ultraviolet light. Keep container or pens closed when not in use. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor. Consumption of food and beverages should be avoided in work areas.
Other Precautions: For industrial use only. Do not ingest. Always wash hands and face with soap and water before eating, drinking, and smoking.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: If vapor or mist is generated when the material is heated or handled, 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: Consistent with general hygienic practice for any material, skin contact should be minimized. Use chemical resistant gloves.
Eye: Eye protection is not required under conditions of normal use. If material is handled such that it could

be splashed into eyes, wear plastic face shield or splash-proof safety glasses or goggles.

IX. PHYSICAL AND CHEMICAL DATA

Boiling Range °F: 212 - 369 °F	Vapor Density (Air = 1): 2.6
Relative Density (H₂O = 1): 0.96	Vapor Pressure (mm Hg @ 68°F): 1.0
Material Density Lbs./Gal: 7.99	Solubility in Water: Soluble
% Volatiles by Weight: < 0.2	% Solids by Weight: 99.8
VOC: lbs/gal: .016 g/L: 19.2	Appearance/Odor: Lt. colored liq., acetic acid odor

X. STABILITY AND REACTIVITY INFORMATION

Stability (Thermal, Light, etc.): Stable	Conditions to avoid: Excessive heat, keep away from open flame, sources of ignition
Hazardous Polymerization: Will not occur.	Materials to avoid: Strong bases, strong oxidizing agents.
Hazardous Decomposition Products: Thermal decomposition may yield carbon oxides..	

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 Cancer (IARC).

Mutagen: No Data

Teratogen: No Data

Acute Toxicity:

Citric Acid 77-92-9 EC No 201-069-1

LD50 Oral- rat- 5,400 mg/kg

Skin- rabbit- Mild skin irritation – 24h Dermal: Rat LD50 > 2,000 mg/kg

Eyes – rabbit – Severe eye irritation – 24 h

Prolonged or repeated exposure may cause allergic reactions to sensitive individuals.

Chronic Exposure: No Data

Potassium Iodide 7681-11-0

TDLo oral (human) 2700 mg/kg Reproductive

LDLo ivn (rat) 167 mg/kg CNS

LDLo oral (mus) 1862 mg/kg CNS

LDLo ipr (mus) 1117 mg/kg CNS

XII. ECOLOGICAL INFORMATION

This product has not been evaluated at this time. As with all products and chemicals Do Not allow 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.

XIV. TRANSPORT INFORMATION

Flammability Classification:	Combustible Liquid
OSHA:	Class III B
DOT (Ground):	Not Regulated
IMDG (Sea):	Not Regulated
IATA (Air):	Not Regulated

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.

DSL Status:

All components of this product are on the Canadian DSL list.

U.S. State Regulations

California Proposition 65:

This product does not intentionally contain any chemicals known by the state of California to cause cancer and/or reproductive harm. Moreover, Gans Ink and Supply Co., Inc. does not routinely analyze its products for impurities which may be such chemicals.

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.

B

Safety Glasses
Gloves

