

Material Safety Data Sheet # 121
For Printing Inks and related Materials
OSHA Hazard Communication Standard, 29 CFR 1910.1200

Date of preparation: 1/14/02
 Supersedes: 10/10/08
 Updated: 2/28/2013
 MSDS#: 121

I. PRODUCT IDENTIFICATION

Manufacturer: Gans Ink and Supply Co, Inc. Address: 1441 Boyd Street Los Angeles, CA 90033 Emergency phone: (323) 264-2200	<p align="center">HMIS HAZARD IDENTIFICATION</p> <table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Flammability</td> <td>2</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> <tr> <td>Personal Protection</td> <td>B</td> </tr> </table>	Health	2	Flammability	2	Reactivity	1	Personal Protection	B
Health	2								
Flammability	2								
Reactivity	1								
Personal Protection	B								
Product Class: Silkscreen Retarder	Manufacturer's code: S-1306								
Trade Name: Pyroscreen Reatarder									

II. HAZARDOUS INGREDIENTS

Material	CAS #	%	Exposure Limits	Units
2- Butoxyethanol				
Ethylene Glycol Monobutyl ether (EINECS) 203-905-0	111-76-2	100 %	OSHA PEL/ TLV (240 mg/m3) OSHA PEL/ TWA 8 hour	50 ppm 50 ppm
XN, R20, 21, 22 ; R36/38 H302, H312, H332, H315, H319			ACGIH TWA (120 mg/m3) 8 hour	20 ppm
Relevant Phrases: For the wording of risk phrases and Health Hazard statements refer to Section XVI				

III. HEALTH HAZARD INFORMATION

Effects of Overexposure
Inhalation: Avoid inhalation. Toxic and harmful if inhaled. Vapors expected to be irritating. Hemolytic anemia and concomitant liver/ kidney damage is possible. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and or difficulty breathing. If material enters lungs, signs and symptoms include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and / or fever.
Skin Contact: Avoid skin contact. This product is irritating to the skin upon direct contact. May be absorbed through the skin in harmful amounts. 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. Primary irritant, severely irritating to the eyes, causing pain, redness, swelling, and blurred vision. Possible damage to cornea.
Ingestion: Do not ingest. May be harmful if swallowed. Liquid can directly enter the lungs. Possible aspiration hazard. 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 *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, while holding eyelids open. If easy to do remove contact lenses. Seek immediate medical attention.

Skin: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness pain and / or blisters occur, seek immediate medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation: Move victim to fresh air. 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: Seek immediate medical attention. Call a physician or poison control center immediately. **DO NOT** induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. **NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

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: 143.6 °F (62 °C) Tag closed cup	Auto-ignition Temperature °F: 460 °F (238°C)
--	---

Flammable Limits in Air (% Volume)	Lower Limit: No Data	Upper Limit: No Data
---	-----------------------------	-----------------------------

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

Special Fire Fighting Procedures: Fire fighters wear self contained breathing apparatus and full protective clothing while fighting fires involving chemicals. Use water spray to keep fire exposed containers cool to avoid rupture. The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Do not discharge extinguishing waters into the aquatic environment. Do not allow to enter sewers drains etc.

Unusual Fire & Explosion Hazard: Dense smoke may be generated while burning; carbon dioxide, carbon monoxide, and other oxides may be generated as products of combustion. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Remove all sources of ignition immediately. Wear appropriate personal protective equipment (gloves, goggles, apron). Remove contaminated clothing immediately. For large spills, dike area and contain spill. Absorb with absorbent material such as sand, sawdust, vermiculite or sweeping compound and dispose of in a container for chemical waste or in an approved landfill. Prevent run – off from entering storm drains, sewers and ditches which lead to waterways.

VII. HANDLING AND STORAGE

Handling and Storage: Avoid breathing vapors. Avoid contact with eyes, skin and clothing. Use only in a well ventilated area. Keep containers closed when not in use. Minimize exposure to air. Keep away from all sources of heat and ignition. Do not cut, drill, grind or weld or perform similar operations on or near containers. Rinse empty drums to avoid accumulation of fumes. Do not evaporate or distill to dryness as it may permit the formation of explosive peroxides. If peroxide formation is suspected, do not open or move container. Keep away from all oxidizing materials. Wash thoroughly after handling.

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.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: Good general ventilation (typically 10 air changes per hour) should be used. Local ventilation or other engineering controls to maintain airborne levels in accordance with good engineering practice must be provided to maintain concentrations below the specific exposure or flammable limits.
Personal Protective Equipment
Respirator: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker's health, an approved respirator must be worn. An organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified.
Skin: Protective chemical resistant gloves, footwear and protective clothing are required for contact with product or concentrated solutions. Safety showers are recommended.
Eye: Eye protection is required under conditions of normal use. Wear plastic face shield or splash-proof safety goggles or safety glasses. Eye wash stations are recommended.

IX. PHYSICAL AND CHEMICAL DATA

Boiling Point °F: 336.2 °F (169 °C)	Vapor Density (Air = 1): 4.1
Relative Density (H₂O = 1): 0.902	Vapor Pressure (mm Hg @ 68°F): 0.8
Material Density Lbs./Gal: 7.52	Solubility in Water: Soluble
%Volatiles by Weight: 100	Evaporation Rate: 0.1 Freezing Point: - 103 °F (-75 °C)
VOC: lbs/gal: <7.52 g/L: 902	Appearance/Odor: Clear Liquid

X. STABILITY AND REACTIVITY INFORMATION

Stability (Thermal, Light, etc.): Stable under normal conditions.	Conditions to avoid: Excessive heat
Hazardous Polymerization: Will not occur.	Materials to avoid: Avoid heat; sparks open flame and other sources of ignition. Avoid contact with strong oxidizing agents, acids, strong bases.
Hazardous Decomposition Products: Thermal decomposition is highly dependant on conditions. A complex mixture of airborne solids, liquids and gases, including CO ₂ , CO, and other oxides may be generated as products of combustion or oxidative degradation. May form explosive peroxides.	

XI. TOXICOLOGICAL INFORMATION

CARCINOGEN: This product does not contain any known carcinogens at 0.1 % or above or carcinogens known to be hazardous at lower concentrations.	
Mutagen:	No Data
Teratogen:	No Data
Reproductive Toxicity:	No Data
Acute toxicity data:	
Oral LD-50 Rat: 1,746 mg/kg	
Oral LD-50 Mouse: 1,519 mg/kg	
Oral LD-50 Guinea pig: 1,414 mg/kg	
Inhalation LC- 50 Mouse: 7 h: 700 ppm	
Inhalation LC-50 Female Guinea pig: 1 h: > 633 ppm (highest concentration tested.)	
Inhalation LC-50 Male Guinea pig: 1h: > 691 ppm	
Dermal LD-50 Rabbit: 435 mg/kg	
DermalLD-50 Guinea pig: > 2,000 mg/kg (only dose tested)	
Skin Irritation Guinea pig: strong	
Skin Irritation Rabbit: moderate	
Eye Irritation Rabbit: moderate	
Skin Sensitization Human: None	

XII. ECOLOGICAL INFORMATION

Acute Aquatic Effects Data:

24 h LC-50 Goldfish: 1650 – 1700 mg/l
96 h LC-50 Fathead minnow: 2137 mg/l
96 h LC-50 Bluegill sunfish: 1490 mg/l
168 h LC-50 Guppy: 983 ppm
24h EC-50 Daphnid: 1850 mg/l
24 h LC-50 Daphnid: 1720 mg/l
48 h LC-50 Daphnid: 835 mg/l

Oxygen Demand Data:

BOD-5: 1,3000 mg/g
BOD-20: 1,800 mg/g
COD (Chemical Oxygen Demand): 2,180 mg/g
ThBOD: 2,300 mg/g

Keep out of waterways, drains and sewers.

XIII. DISPOSAL INFORMATION

Waste Disposal Method: Proper disposal should be evaluated based on regulatory status of this material, potential contamination from subsequent use and spillage, and regulations governing disposal in the national, state or local area.

No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters.

Since emptied containers retain residue, follow label warnings and dispose of containers according to state, local and Federal regulations.

XIV. TRANSPORT INFORMATION

Flammability Classification:	Combustible Liquid
OSHA:	Class III
US DOT (Ground):	Not Regulated: for less than 119 gallons
DOT Shipping Name:	Combustible Liquids, N.O.S. (Ethylene Glycol Monobutyl Ether)
DOT ID Number:	NA 1993
Class:	3
Packing Group:	PGIII
IMO/IMDG (Sea):	Not Regulated
IATA/ IACO (Air):	Not Regulated

XV. REGULATORY INFORMATION

SARA Title III Section 313:

This product is subject to the reporting requirements of the SARA Superfund Amendments and Reauthorization Act.

<u>Chemical</u>	<u>CAS #</u>	
2_Butoxyethanol	111-76-2	Glycol Ether category

SARA Section 311/312 – Hazard Communication Standard (HCS):

This product is regulated under Section 311/312 HCS (40 CFR 370).

Acute health hazard: Yes
Chronic health hazard: Yes
Flammability hazard: Yes
Pressure hazard: No
Reactivity hazard: No

TSCA Section 8(b) Inventory Status:

This product is listed on the TSCA Inventory. Any impurities present in this product are exempt from listing.

SARA Section 304 – CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):

This product contains Glycol Ether which although included as a broad category on the CERCLA hazardous list, has not been assigned a reportable quantity.

WHMIS (Workplace Hazardous Materials Information System) Ingredient Disclosure List:

Canada Hazard Classification: B/3, D/ 1/A, D/2/B

U.S. State Regulations

Right –To- Know

This product is listed as hazardous by the states of Massachusetts, Florida, Minnesota, Washington, and Pennsylvania.

California Proposition 65:

This product is regulated as a Hazardous Volatile Organic Compound under Southern California's SCAQMD.

International Inventory Status:

DSL (Canadian Domestic Substance List) and CEPA (Canadian Environmental Protection Act);

This product is listed on the DSL. Any impurities present in this product are exempt from listing.

EINECS (European Inventory of Existing Commercial Chemical Substance): This product is listed or otherwise complies with EINECS requirements. EINECS number: 203-905-0

AICS/ NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean Inventory or otherwise complies.

Philippines Inventory (PICCS): This product is listed on the Philippines Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China (IECSC): All components of this product are listed on the IECSC.

XVI. OTHER INFORMATION

Relevant R Phrases and Hazard Statement Codes

Xn; Harmful
R20/21/21: Harmful by inhalation, in contact and if swallowed
R36/38: Irritating to eyes and skin

H302: Harmful if swallowed
H312/ 315: Harmful in contact with skin, causes irritation
H319: Causes serious eye irritation
H332: Harmful if inhaled

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.

Ask supervisor or safety specialist for handling instructions.

X

Splash Goggles or
Safety Glasses or
Face Shield
Gloves
Apron

