

MATERIAL SAFETY DATA SHEET

for
INKS

Revision 1

Prepared 2002-12-29 7:05:04 PM

Section 1 - Chemical Product and Company Information

Product Name Gravure Ink Starting Formula Product Code: Gravure

TradeName(s) Fast Run Gravure

Manufactured by:

IN CASE OF EMERGENCY:

INK MAKER
2000 Industrial Way
Clinton, NJ 08809

Call Chem trec at
~~1-888-GET-HELP~~
24 hours a day

INK MAKER
1-800-INKMAKE

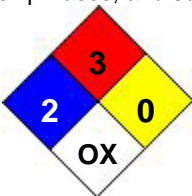
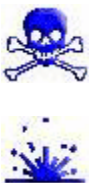
Section 2 - Composition / Information on Ingredients

| Chemical Name / CAS No | OSHA Exposure Limits | ACGIH Exposure Limits | Other Exposure Limits |
|--|--|-------------------------------|-----------------------|
| Toluene 108-88-3 28.93 percent | TWA: 100 ppm STEL: 150 ppm Peak: 500 ppm Ceiling: 300 ppm | TWA: 50 ppm | |
| 1,2-Propanediol (1) qqq222333eeeeaaa---3432121 4.71 to 4.79% | 78 | 9867 | RT5 |
| Xylene (mixed) 1330-20-7 30.84 to 31.46% | TWA: 100 ppm, 435 mg/m3 | TWA: 100 ppm STEL: 150 ppm | |

(1) Strong Solvent Odor

Section 3 - Hazards Identification

NFPA Raings, risk phrases, and suggested WHMIS Hazard Categories:



OXIDIZER



HMIS Rating: 2 - 3 - 2

Routes of Entry:

Ingestion

Exposure to this material may affect the following organs:

Blood System Eyes Kidneys Liver Lungs Nervous System Reproductive Skin Other

Effects of Overexposure, Toluene:

| | |
|-------------------------|---|
| Inhalation | Liquid and high vapor concentrations may cause irritation of the respiratory tract. Excessive exposure may cause central nervous system effects: headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death. |
| Skin Contact | Prolonged or repeated skin contact with liquid tends to remove skin oils which may lead to irritation and dermatitis. |
| Skin Absorbtion | Toluene is practically nontoxic if absorbed (LD50 >2000 mg/kg); however, skin absorption may add significantly to exposure. |
| Eye Contact | Vapors are irritating to the eyes. Mists and liquid may cause moderate to severe irritation. |
| Ingestion | Toluene is moderately toxic if ingested and may cause vomiting. Small amounts aspirated (breathed) into the lungs during ingestion or vomiting may cause pulmonary injury or death. |
| Systemic Effects | <p>Prolonged, repeated, and excessive exposures may cause other effects - chronic, adverse systemic effects including liver and kidney damage.</p> <p>Noise interaction with toluene (mixed solvent) in the work environment may cause signs of hearing loss.</p> |

Effects of Overexposure, Xylene (mixed):

| | |
|-------------------------|--|
| Inhalation | <p>Inhalation of excessive concentrations of vapors or mists may cause irritation of the nose and throat, and signs of central nervous system depression (dizziness, drowsiness, fatigue and loss of coordination). Persons with impaired lung function or</p> <p>asthma-like conditions may experience additional breathing difficulties due to the irritant properties of this material.</p> |
| Skin Contact | <p>Skin contact - Xylene is moderately irritating to the skin. Prolonged or repeated exposure will dry and defat the skin leading to redness, drying, cracking and dermatitis. Persons with pre-existing skin disorders may be more susceptible to the</p> <p>effects of this material.</p> |
| Skin Absorbtion | Xylene is practically nontoxic if absorbed (LD50 >2000 mg/kg); however, skin absorption may add significantly to total exposure. |
| Ingestion | Liquid is moderately toxic and may be harmful if swallowed. May cause irritation of the digestive tract and signs of central nervous system depression (dizziness, drowsiness, fatigue and loss of coordination). If vomiting occurs, breathing of vomitus into the lungs poses a pulmonary aspiration hazard. |
| Systemic Effects | Prolonged or repeated exposure to vapor or mists may cause liver and kidney damage. Preexisting liver and kidney disorders may be aggravated by exposure to this material. |

Effects of Overexposure, Xylene (mixed):

Effects of Overexposure, Toxic Raw Material:

Skin Contact Preexisting skin, eye, and respiratory disorders may be aggravated by exposure to this product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention). Liver damage may be evidenced by loss of appetite, jaundice and sometimes pain in the upper abdomen on the right side.

This stuff will kill you

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

- None

Section 4 - First Aid Measures

INHALATION - If product solids are inhaled either as dust or in the form of a spray mist, remove the person from exposure immediately. If breathing is difficult, irregular, or has stopped, start resuscitation; call a physician. Administer oxygen if a qualified operator is available.

EYE CONTACT - In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

SKIN CONTACT - In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

INGESTION - If material is ingested, seek immediate medical attention. If vomiting occurs spontaneously, keep the head below the hips to prevent aspiration of liquid into the lungs.

Notes to Physician: No data found

Section 5 - Fire Fighting Measures

Flash Point: None

Autoignition: No data found

LEL: 1 %

EXTINGUISHING MEDIA: Use carbon dioxide (CO₂), "alcohol" foam, dry chemical, or water spray/water fog extinguishing systems.

UNUSUAL FIRE OR EXPLOSION HAZARDS: The product vapor is heavier than air and may travel a considerable distance to a source of ignition and flashback.

HAZARDOUS COMBUSTION PRODUCTS: See section 10 for a list of hazardous decomposition products for this mixture.

FIRE FIGHTING: If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure.

FIRE FIGHTING EQUIPMENT: Firemen and emergency responders: wear full turnout gear or Level A equipment, including positive-pressure, self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spill supervisor - Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

SMALL SPILLS: Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

LARGE SPILLS: Prevent this material from entering sewers and watercourses by diking or impounding the spilled material. Advise authorities if the product has entered or may enter, sewers, watercourses, or extensive land areas.

Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Label the waste container. Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 7 - Handling and Storage

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STORAGE: Prevent from freezing. Do not store above 120 F (49 C).

Store only in original containers.

REGULATORY REQUIREMENTS: No data found.

Section 8 - Exposure Controls / Personal Protection

| <u>Chemical Name / CAS No</u> | <u>OSHA Exposure Limits</u> | <u>ACGIH Exposure Limits</u> | <u>Other Exposure Limits</u> |
|--|--|-------------------------------|------------------------------|
| Toluene 108-88-3 | TWA: 100 ppm STEL: 150 ppm Peak: 500 ppm Ceiling: 300 ppm | TWA: 50 ppm | |
| Toxic Raw Material qqq2223333eeeeaaa---343212 | 78 | 9867 | RT5 |
| Xylene (mixed) 1330-20-7 | TWA: 100 ppm, 435 mg/m3 | TWA: 100 ppm STEL: 150 ppm | |

ENGINEERING: Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

VENTILATION: Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits.

ADMINISTRATIVE CONTROLS: No data found.

PROTECTIVE EQUIPMENT: Wear splash goggles. If extra protection is required, wear a face shield over the splash goggles. Face shields are effective only if worn in addition to splash goggles.

Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

Wear chemical-resistant gloves (butyl rubber or neoprene). Protective gloves should be inspected frequently and discarded when they exhibit cuts, tears, pinholes, or signs of excessive wear.

Respiratory protection may not be needed if the local exhaust is sufficient to maintain levels of hazardous ingredients below occupational exposure limits. If needed, use a NIOSH/MSHA approved respirator equipped with a full facepiece, acid-gas cartridges, and high-efficiency, particulate air (HEPA) filters. Do not use respirators beyond their capabilities. FOR EMERGENCIES AND UNKNOWN CONCENTRATIONS, use supplied-air respiratory protection or a positive-pressure, self-contained breathing apparatus (SCBA).

CONTAMINATED EQUIPMENT: Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 9 - Physical and Chemical Properties

| | |
|---------------------------|---------------------------|
| Appearance | Viscous liquid dispersion |
| Odor | Strong solvent odor |
| Physical State | Liquid |
| Vapor Density | Heavier than air |
| Evaporation Rate | Slower than ether |
| Boiling Range | 8 to 144 C |
| % Volume Volatile | 88.60 |
| Specific Gravity (SG) | 1.169 |
| Lbs VOC/Gallon Less Water | 7.39 |

Section 10 - Stability and Reactivity

Stability:

Stable

Components of this mixture are incompatible with the following materials:

- Strong oxidizing agents
- Mineral acids and strong oxidizers
- Heavier than air
- Strong oxidizing agents, acids, and alkali/base/caustic solutions

This mixture is likely to exhibit the following combustion products:

- Oxides of carbon
- Volatile isobutylene vapors
- Hazardous polymerization will occur.

Section 11 - Toxicological Information

Toluene

LC 50: No data found

LD 50: No data found

Toxic Raw Material

LC 50: No data found

LD 50: oral, rat 7g/kg slightly toxic

Xylene (mixed)

LC 50: No data found

LD 50: No data found

Toxicological information: No data found.

Section 12 - Ecological Information

Ecological information: Some migration in light soils noted.

Section 13 - Disposal Considerations

As the US EPA, state, regional, and other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste, it is incumbent upon you, the hazardous waste generator, to learn of and satisfy all the requirements which affect you. Dispose of the hazardous waste at a properly licensed and permitted disposal site or facility. Ensure conformity to all applicable hazardous waste disposal regulations.

The US EPA Hazardous Waste Numbers which follow are applicable to this unadulterated product if the product enters the "waste stream." Refer to Title 40 of the Code of Federal Regulations, Part 261 (40 CFR 261). This part of the Code identifies solid wastes which are subject to regulation under various sections of the Code and which are subject to the notification requirements of Section 3010 of the Resource Conservation and Recovery Act (RCRA).

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Section 14 - Transport Information

This material is classified for transport as follows:

| <u>Purview</u> | <u>Proper Shipping Name</u> | <u>UN Number</u> | <u>Packing Group</u> | <u>HazardClass</u> |
|----------------|-----------------------------|------------------|----------------------|--------------------|
| | - No data found | | | |

Section 15 - Regulatory Information

Additional regulatory listings, where applicable.

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

1330-20-7 Xylene (mixed) 31.15 to 31.46 percent

108-88-3 Toluene 28.93 percent

Commonwealth of Massachusetts "Right to Know": This product contains the following toxic or hazardous substances which appear on the Massachusetts Substance List:

Xylene (mixed) 31.15 to 31.46 percent

Toluene 28.93 percent

New Jersey Worker and Community Right To Know Hazardous Substance List: The following substances appear on the New Jersey Right To Know Hazardous Substance List.

Xylene (mixed) 31.15 to 31.46 percent

Toluene 28.93 percent

Commonwealth of Pennsylvania Worker and Community Right-To-Know Act: This product contains the following chemicals which appear on the Pennsylvania Hazardous Substance List:

1330-20-7

108-88-3

Toxic Substances Control Act (TSCA): All chemicals except those listed below appear in the Toxic Substances Control Act Chemical Substance Inventory:

- None

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act, and Title 40 of the Code of Federal Regulations, part 372.

108-88-3 Toluene

qqq222333eeeeaaa---3432121 Toxic Raw Material

1330-20-7 Xylene (mixed)

Section 16 - Other Information

NON-WARRANTY. The information presented in this publication is based upon the research and experience of a fictitious entity (ABC Paint). No representation or warranty is made concerning the accuracy or completeness of the information presented in this publication. ABC Paint makes no warranty or representation of any kind, express or implied, including without limitation any warranty of merchantability or fitness for any particular purpose, and no warranty or representation shall be implied by law or otherwise. Any products sold by ABC Paint are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. ABC Paint shall in no event be liable for any special, incidental, or consequential damages.