



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Trade Name INK TYPE PG NT
MSDS Number 369
Supplier ITW TRANS TECH
475 N. GARY AVENUE
CAROL STREAM, IL 60188 USA

Telephone Numbers - 24 Hour Emergency Assistance
Emergency (352)323-3500

Telephone Numbers - General Assistance
Information (630)752-4000

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration	Exposure Limits / Health Hazards
CYCLOHEXANONE	108-94-1	10 - 25 %	ACGIH TLV: 100 mg/m3
BUTYLGLYCOLATE	7397-62-8	10 - 25 %	ND
4-HYDROXY-4-METHYLPENTAN-2-ON	123-42-2	5 - 10 %	ACGIH TLV: 238 mg/m3
N-BUTYLACETATE	123-86-4	5 - 10 %	ACGIH TLV: 713 mg/m3
2-METHOXY-1-METHYLETHYL ACETATE	108-65-6	5 - 10 %	NA

3 HAZARDS IDENTIFICATION

Emergency Overview

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Potential Health Effects, Eye

Flammable. Risk of serious damage to eyes.

Signs & Symptoms of Short-Term (Acute) Exposure

Excessive vapor concentration in air, especially in confined spaces, may cause asphyxiation. Excessive inhalation of vapors can cause nasal, throat and respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. Vapors may cause severe eye irritation, redness, tearing and blurred vision. Prolonged skin contact may lead to extraction of natural oils with resultant dry skin, cracking, irritation and dermatitis. Notice: intentional misuse by deliberately concentrating and inhaling the contents maybe harmful or fatal. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Effects of Long-Term (Chronic) Exposure

Health studies have shown that many solvents pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids and vapors should be minimized. -Prolonged or continuous inhalation of vapors may result in delayed lung damage. -Repeated or prolonged inhalation of vapor may cause liver and kidney damage. Repeated inhalation of vapor in high concentration can change the blood picture.

4 FIRST AID MEASURES

Skin

Wash away with soap and water and rinse. Do not use solvents or thinners.

Eye

Remove contact lenses, keep eyelids open. Flush with water for at least 15 minutes, consult a physician.

Inhalation

Move to fresh air. Give artificial respiration if necessary.

Ingestion

Do not induce vomiting. Keep at rest. Call a physician.

Medical Conditions Aggravated by Exposure

In all cases of doubt or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Unconsciousness: lateral position - call a physician.

5 FIRE FIGHTING MEASURES

Extinguishing Media

Alcohol resistant foam, co2, powders, water spray.
Not suitable: water jet

Unusual Fire & Explosion Hazards

Closed containers may explode when exposed to extreme heat. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Flash Point	25 °C
Flammability Limits in Air, Lower, % by Volume	0.6
Flammability Limits in Air, Upper, % by Volume	10

6 ACCIDENTAL RELEASE MEASURES

Environmental Precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewer systems, inform appropriate authorities in accordance with local regulations.

Spill or Leak Procedure

Remove all sources of ignition, avoid breathing vapors, ventilate area, remove with liquid binding material. Contain and collect spillage with non-combustible absorbent materials, e.g., sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. Clean preferably with a detergent; avoid use of solvents.

7 HANDLING & STORAGE

Handling

Do not take internally, use approved printing procedures, observe label precautions. Keep closures tight and container upright to prevent leakage. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. Prevent the creation of flammable or explosive concentration of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Comply with the health and safety at work laws.

Storage

Always keep in containers of same material as the original one. Avoid heating and direct sunlight.

Ventilation

Adequate ventilation is required. Where reasonable practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapor below the OEL, suitable respiratory protection must be worn.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Personal Protection Equipments (PPE)

Wear chemical safety goggles.

Skin Protection: Personal Protection Equipments (PPE)

Chemical resistant gloves (rubber) After washing hands replace lost skin fat by bat containing skin creams. For long term contact use gloves with protection index of 6 (accordingly> 480 minutes of permeation time). Personal should wear anti static clothings made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact. Use appropriate skin protection cream before work.

Respiratory Protection: Personal Protection Equipments (PPE)

If work place limits are exceeded, a gas mask approved for this particular job must be worn.

General

Eye bath and shower should be available.

9 PHYSICAL & CHEMICAL PROPERTIES

Odor and Appearance

Colored paste w/odor of organic solvents

Boiling Point	124 - 200 °C
Specific Gravity	1.05 - 1.5 mg/cm ³
Melting Point	NA
Percent Volatile	42 - 62
Vapor Pressure	12.5 hPa
Evaporation Rate	NA
Vapor Density	> 1
Solubility In Water	NO

10 STABILITY & REACTIVITY

Stability/Incompatibility

Stable under normal conditions of use. Stable under normal storage conditions.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous Reactions/Decomposition Products

Carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization

Will not occur.

11 TOXICOLOGICAL INFORMATION

Routes of Exposure

Inhalation, skin, eyes and ingestion.
This product is unlikely to harm health, given normal and proper handling and hygenic precautions. Prolonged inhalation of vapors in high concentrations may lead to headache, giddiness and nausea. In case of contact with the product: danger of resorption through the skin, irritation of skin/mucous membranes.

12 ECOLOGICAL INFORMATION

EcoToxicological Information

Do not empty into drains. Toxic effect on fishes and micro-organisms.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Do not empty into waters or drains. Can be taken to a suitable incineration center in observance of local regulations. Empty containers should be scrapped or reconditioned. Containers which have not been emptied properly must be treated as special waste.

14 TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements:

General Transportation Information for Bulk Shipments

Proper Shipping Name	Printing Ink	UN/NA Code	1210
Hazard Class	3		
Packaging Group	Class III		
Labels Required	Flammable Liquid		

15 REGULATORY INFORMATION

NFPA Ratings

Health	Flammability	Reactivity	Special Hazards
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HMIS Ratings

Health 2	Flammability 3	Reactivity 1	Personal Prot. Equip. C
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16 OTHER INFORMATION

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Completed By