

1. ID of the PRODUCT & COMPANY IDENTIFICATION

Product Name Ink UV-C UV Cured Pad Printing Ink

Chemical Family: cationic cured epoxy aliphatic resin
Formula: Proprietary
CAS Registry No: Not applicable (Mixture)
NFPA/HMIS Classification: Health - 2; Fire - 2; Reactivity - 1

Recommended uses of Chemical mix: Printing ink for Pad Printer using a closed cup pad printing machine.

Manufacturer's Name

ITW Trans Tech
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Carol Stream, IL 60188
www.itwtranstech.com

Telephone – General Assistance 1-(630) 752-4000

24 Hr. EMERGENCY Phone InfoTrac: 1-(352) 323-3500

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity – Oral	Category 4 – (H302)
Serious eye damage/eye irritation:	Category 2 – (H319)
Chronic aquatic toxicity:	Category 3 - (H412)
Flammable liquids:	Category 3 – (H226)
Specific target organ toxicity (repeated exposure)	Category 1B–(H372)
Skin sensitization	Category 1B–(H317)

Label Elements



Signal Word Danger

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Hazard Statements

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H372	Causes damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects
H360D	May damage the unborn child
H226	Flammable liquid and vapor
UH208	May produce an allergic reaction

Precautionary Statements:

- P210- Keep away from heat/sparks/open flames/ hot surfaces. No smoking
P260 Do not breathe fume/gas/mist/vapors/spray
P273- Avoid release to the environment
P280 wear eye protection / face protection

Hazards not otherwise classified: HNOC May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Component	CAS #	%	Notes
Aliphatic epoxy oligomers mix	Trade Secret	5 - 50	1
polyester monomers	Trade Secret	10-30%	1
Photoinitiator	Trade Secret	1-5%	1
Surfactants	Trade Secret	1-2%	1
Solvent mixture	Trade Secret	20-30%	1
TiO2 White pigment Pigments and inorganic fillers	Trade Secret	20-30%	1

Note 1. The exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Irritating to eyes and skin. Potential sensitizer.

General Advice

Show this safety data sheet to the attending doctor

Eye Contact

Immediate flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

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Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administrate artificial respiration. Get medical attention immediately.

Ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed:

None under normal conditions of use.

Indication of any immediate medical attention and special treatment needed:

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Carbon dioxide or dry chemical.

Basic Fire Fighting Procedures

Water may be ineffective. Water should be used to cool containers exposed to fire. Firefighting personnel should wear self-contained breathing apparatus and protective clothing.

Unusual Fire & Explosion Hazards

With excessive heat, hazardous polymerization may occur. Keep container tightly closed, isolate from heat, sparks, electrical equipment and open flames. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

Protective Equipment and Precautions for Firefighters.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers/tanks with water spray. Sealed containers may rupture when heated.

Flash Point **Point** 54-57 deg. C (Rapid Tester, Closed Cup)
Flammability Limits in Air, Lower, % by Volume na

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Flammability Limits in Air, Upper, % by Volume na

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from the upwind or spill/leak.

Environmental precautions

Prevent product from entering drains. Prevent further leakage and spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillage cannot be contained.

Spill or Leak Procedure

Contain spillage, and then collect with non-combustible absorbent material, like sand, earth, diatomaceous earth, vermiculite and place in a container for disposal according to local/national regulations (see section 13). Use clean non-sparking tools to collect absorbed materials. Appropriate protective clothing, including rubber gloves, chemical splash goggles and respirators (if ventilation is poor) should be worn.

7. HANDLING & STORAGE

Precautions for safe handling

Handling

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Wear gloves and eye protection.

Conditions for safe storage including any incompatibilities

Storage

Store in closed containers closed in a dry cool and well ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep containers closed when not in use. Keep out of the reach of children. Avoid sources of ignition, sunlight and other ultraviolet light sources. Store between 50 and 80°F (10 and 27°C). Do not store in containers containing iron, copper or copper alloys including brass. Drums are normally coated with an enamel. Smaller containers: use polypropylene or polyethylene preferred.

Incompatible Products

Strong acids, strong bases, strong oxidizing agents, reducing agents and peroxides.

Ventilation

TLV: Not established. Heat generated by UV light sources can volatilize small amounts of monomers before the polymerization is complete. These volatilized monomers can be irritating if

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ventilation is inadequate. This material should be used only with adequate ventilation. Use of local exhaust ducts, fume hoods and/or other mechanical exhaust ventilation is recommended. Respiratory equipment is not required, unless ventilation provisions are inadequate. If needed, NIOSH/MSHA approved respirators with organic vapor cartridges are recommended.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Exposure limits

Eye Protection: Personal Protection Equipment (PPE)

Wear chemical splash goggles. Do not wear contact lenses while handling this material.

Skin Protection: Personal Protection Equipment (PPE)

Wear chemical resistant gloves appropriate for handling acrylates, acetates and any associated clean-up solvents. Do not use vinyl gloves. Inspect gloves frequently for cuts or holes and discard damaged gloves. Wash hands with soap and water after handling this product. Do not clean skin with solvents; solvents might increase skin penetration by this product, as well as being potentially toxic themselves.

Respiratory Protection: Personal Protection Equipment (PPE)]

Use of local exhaust ducts, fume hoods and/or other mechanical exhaust ventilation is recommended. Respiratory equipment is not required unless ventilation provisions are inadequate. NIOSH/MSHA approved respirators with organic vapor cartridges are recommended.

General

Face shields, polyethylene aprons and Tyvek outer garments afford general body/clothing protection.

9. PHYSICAL & CHEMICAL PROPERTIES

Odor and Appearance

Clear or pigmented medium viscosity liquid, Contains solvents so has acetate solvent smell. Clear and pigmented versions using the same base formulations with different pigments. Viscosity range is between 600 to 4000 cps.

Boiling Point	ND
Flash Point	54-57°C (Rapid Tester, Closed Cup)
Specific Gravity	1.1
Melting Point	NI
Percent Volatile	28-35%
Vapor Pressure	ND
Evaporation Rate	<1 (butyl acetate=1)
Vapor Density	>1 (at 20°C)
Solubility in Water	some ingredients are slightly soluble in water

10. STABILITY & REACTIVITY

Stability/Incompatibility

Stable under normal RT conditions.

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Hazardous Decomposition Products

By thermal decomposition, formation at high temperatures.

Hazardous Reaction With strong acids and bases

Conditions to avoid: Excessive heat, sunlight and other UV light sources.

Hazardous Reactions/Decomposition Products:

Carbon monoxide, carbon dioxide, smoke, oxides of nitrogen. Incomplete combustion would result in the boiling off of monomers and generation of smoke. No hazardous decomposition products are expected during normal storage and usage conditions. Hazardous Polymerization in volume may occur with elevated temperatures.. Conditions to avoid: Excessive heat, sunlight and other UV light sources, polymerization catalysts, peroxides and oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure

Inhalation of vapors, direct contact with skin or eyes. Can be irritating to some people. Irritation may be delayed. Prolonged or repeated exposures can cause sensitization.

12. ECOLOGICAL INFORMATION

No additional information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Incinerate in an approved facility; do not incinerate closed containers. Dispose of in accordance with federal, state, and local pollution control requirements. RCRA Hazardous Waste Number: D001, due to ignitability.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements:

General Transportation Information

Proper Shipping Name	Printing Ink (Air Transportation)
UN/NA Code	contains: UN 1210
UN Hazard Class	Flammable liquid (Air Transportation)
Packaging Group	III
Labels required	Flammable liquid (Air Transportation)

Note: In non-bulk shipments via ground transportation, this combustible liquid material may ship unrestricted.

15. REGULATORY INFORMATION

NFPA Ratings

Health 2	Flammability 2	Reactivity 1	Special Hazards	NI
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HMIS Ratings

Health 2	Flammability 2	Reactivity 1	Personal Protection	C
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Federal Regulations

TSCA Status: All ingredients are listed. Section 112- CERCLA:

Section 302: NA

Section 304: NA

Section 311/312: Hazard Categories (Physical & Health)

Section 313: The following ingredients are listed.

<u>SARA Listed Ingredients</u>	<u>CAS Number</u>	<u>Maximum %</u>
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NA

STATE RIGHT-TO-KNOW

California's Proposition 65: None present

State Right-to-Know

California: This product may contain trace amounts of chemicals known to the State of California to cause Cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

Disclaimer

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of ITW Trans Tech. The data on this sheet applies only to the specific material designated herein. ITW Trans Tech assumes no legal responsibility for use of or reliance upon this data.

Key:

ND: No Data

NA: Not Available

NI: Not Indicated

Revision Date

Jan. 6, 2020