

ENTHONE

MATERIAL SAFETY DATA SHEET

Health	2
Flammability	1
Reactivity	1
Personal Protection	

In Case of Emergency

CHEMTREC Number
(800) 424-9300

Section 1. Chemical Product and Company Identification

Product Name ENTHONE® 50-110RX CAT-L-INK
Product Code Number(s) 135827
135627
135628
135629
Material Uses Specialty chemicals for the electronics and surface finishing industries.
Manufacturer ENTHONE
350 Frontage Road
West Haven, CT 06516
(203) 799-4917
(203) 799-8179 (fax)
www.cooksonelectronics.com
Supersedes Date 10/20/00 **Revision No.** 2.01
Print Date 3/11/2004. **Validation Date** 6/25/2003.
Prepared by Anton Mayer - Regulatory Specialist

Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight
EPOXY RESIN AND POLYMERS	Proprietary	30-45
TITANIUM DIOXIDE	13463-67-7	20-30
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	10-20
DIETHYLENE GLYCOL ETHYL ETHER ACETATE	112-15-2	7-13
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	5-10
QUARTZ	14808-60-7	0.1-0.5

All ingredients comply with applicable rules or orders under TSCA

Section 3. Hazards Identification

Physical State and Appearance Liquid. **Odor** Mild. **Color** White.

Emergency Overview DANGER!
May be fatal if swallowed. May cause burns to mouth, throat and stomach.

Routes of Entry Absorbed through skin. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant).

Skin Slightly hazardous in case of skin contact (irritant, permeator). Corrosive to skin on contact. Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Slightly hazardous in case of inhalation (lung irritant). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.

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Ingestion May be fatal if swallowed. May cause burns to mouth, throat and stomach.

Medical Conditions Caused or Aggravated by Overexposure Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Crystalline silica is a component of this product, however, exposure to silica dust is highly unlikely since the silica is part of a viscous, polymeric liquid mixture. Inhalation of crystalline silica has been determined to cause cancer in humans.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Section 5. Fire Fighting Measures

Flammability of the Product Combustible.

Flash Points Open cup: 62.77°C (145°F) (Cleveland.).

Products of Combustion These products are carbon oxides (CO, CO₂). Some metallic oxides.

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Equipment (Fire) Wear NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

Section 6. Accidental Release Measures

Small Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill and Leak Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

Section 7. Handling and Storage

Handling Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. To avoid fire, minimize ignition sources.

Storage Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles.

Body Synthetic apron.

Respiratory Be sure to use a MSHA/NIOSH approved respirator or equivalent. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the selected respirator.

Hands Impervious gloves.

Feet Rubber Boots.

Protective Equipment (Pictograms)



Personal Protection in Case of a Large Spill Splash goggles. Full suit. Rubber Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Ingredient Name

DIPROPYLENE GLYCOL METHYL ETHER

Exposure Limits

ACGIH TLV (United States, 2001). Skin

STEL: 909 mg/m³ 15 minute(s).
 STEL: 150 ppm 15 minute(s).
 TWA: 606 mg/m³ 8 hour(s).
 TWA: 100 ppm 8 hour(s).

NIOSH REL (United States, 2001). Skin

STEL: 900 mg/m³ 15 minute(s).
 STEL: 150 ppm 15 minute(s).
 TWA: 600 mg/m³ 10 hour(s).
 TWA: 100 ppm 10 hour(s).

OSHA PEL 1989 (United States, 1989). Skin

STEL: 900 mg/m³ 15 minute(s).
 STEL: 150 ppm 15 minute(s).
 TWA: 600 mg/m³ 8 hour(s).
 TWA: 100 ppm 8 hour(s).

TITANIUM DIOXIDE

ACGIH TLV (United States, 2001).

TWA: 10 mg/m³ 8 hour(s).

OSHA PEL 1989 (United States, 1989).

TWA: 10 mg/m³ 8 hour(s). Form: Total dust

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE
 QUARTZ

AIHA WEEL (United States, 2001).

TWA: 100 ppm 8 hour(s).

ACGIH TLV (United States, 2001).

TWA: 0.05 mg/m³ 8 hour(s). Form: Respirable fraction

NIOSH REL (United States, 2001). Notes: See Appendix A - NIOSH Potential Occupational Carcinogen

TWA: 0.05 mg/m³ 10 hour(s).

OSHA PEL 1989 (United States, 1989).

TWA: 0.1 mg/m³ 8 hour(s). Form: Respirable dust

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor Mild.	Color White.
pH	Not applicable.		
Boiling Point	173.89 °C		
Melting/Freezing Point	None Identified.		
Specific Gravity	1.4 (Water = 1)		
VOC	384 (g/l).		
Solubility	Butyl acetate.		

Section 10. Stability and Reactivity

Stability and Reactivity	Stable under recommended storage and handling conditions (see section 7).
Conditions of Instability	Keep away from heat, sparks and flame.
Incompatible Substances	Reactive with oxidizing agents.
Hazardous Decomposition Products	In a fire: toxic oxides of carbon and nitrogen. Metallic oxides.
Hazardous Polymerization	Will not occur.

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Section 11. Toxicological Information

Toxicity Data

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
DIPROPYLENE GLYCOL MONOMETHYL ETHER	LD50	7500 mg/kg	Oral	Dog
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LD50	8532 mg/kg	Oral	Rat

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified + (Proven.) by NIOSH [QUARTZ]. Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC [QUARTZ].
MUTAGENIC EFFECTS: None identified.
TERATOGENIC EFFECTS: None identified.

Special Remarks on Toxicity Absorption of toxic amounts through the skin is unlikely under ordinary conditions of industrial use.

Special Remarks on Chronic Effects on Humans Crystalline silica is a component of this product, however, exposure to silica dust is highly unlikely since the silica is part of a viscous, polymeric liquid mixture. Inhalation of crystalline silica has been determined to cause cancer in humans.

Special Remarks on Other Toxic Effects on Humans Systemic toxicity is very unlikely under ordinary conditions of industrial use. The glycol ether in this product does not cause adverse effects on the male and female reproductive systems.

Any component listed in this section that is not listed in Section 2 is present in the product in concentrations below legal disclosure limits (1% for hazardous components and 0.1% for carcinogens)

Section 12. Ecological Information

Enthone has not conducted specific studies on the ecotoxicity or environmental fate of this product.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with all applicable environmental control regulations.

Section 14. Transport Information

DOT Classification -
UN number Not regulated.
Proper shipping name -

This Transport Information applies only to the Product Code Number(s) listed in Section 1. Other container sizes may require different Transport Information. If assistance is required, contact Regulatory Affairs at 203-799-4936.

Section 15. Regulatory Information

U.S. Federal Regulations SARA 313 toxic chemical notification and release reporting: DIETHYLENE GLYCOL ETHYL ETHER ACETATE

All ingredients comply with applicable rules or orders under TSCA

State Regulations

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: QUARTZ

Any component listed in this section that is not listed in Section 2 is present in the product in concentrations below legal disclosure limits (1% for hazardous components and 0.1% for carcinogens).

Section 16. Other Information

Definition of Terms

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ACGIH	American Conference of Governmental Industrial Hygienists
Ceiling	Maximum exposure limit defined by OSHA
CAS	Chemical Abstract Service
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TLV-C	ACGIH Threshold Limit Value, Ceiling
TRADE SECRET	Claimed as allowed under 29CFR§1910.1200
TSCA	Toxic Substances Control Act

Disclaimer

This Material Safety Data Sheet may be used to comply with OSHA's Hazard Communication Standard, 29CFR§1910.1200. Enthone furnishes the data contained herein in good faith at customer's request without liability or legal responsibility for same whatsoever, and no warranty or guarantee, express or implied, is made with respect to such data; nor does Enthone grant permission, recommendation, or inducement to infringe any patent whether owned by Enthone or others. The data is offered solely for your information and consideration. Since conditions of use are beyond Enthone's control, user assumes all responsibility and risk.

