

Enthone
 Enthone Inc.
 P.O. Box 1900
 New Haven, CT 06508
 (203) 934-8611
 (203) 799-8179 Fax

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Printed 2/19/2001.

Product Name 50-200AR 50-SERIES INK (YELLOW)

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

EMERGENCY PHONE NUMBER
 Chemtrec, U.S.A. 1-800-424-9300

PRODUCT DESCRIPTION
 Resin and filler mixture.

GENERAL USE
 Two component M-series marking ink.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#
Polymer of Epoxy Resin & Bisphenol A	35.0- 50.0	025036-25-3
Barium Sulfate	12.0- 24.0	7727-43-7
Cadmium Sulfide	9.0- 12.2	1306-23-6
Diethylene Glycol Ethyl Ether Acetate	7.0- 15.0	112-15-2
Dipropylene Glycol Mono Methyl Ether	7.0- 15.0	34590-94-8
Propylene Glycol Mono Methyl Ether Acetate	7.0- 15.0	108-65-6
Solvent Naptha, Petroleum	1.0- 5.0	64742-94-5
Zinc Sulfide	< 5.0	1314-98-3

DISCLOSURE:
 This product is hazardous under the criteria of the USA OSHA Hazard Communication Standard 29 CFR 1910.1200.
 Any ingredient claimed as a trade secret will be disclosed in accordance with 29 CFR 1910.1200 (i).
 See Section 8 of this MSDS for any noted exposure limits for these compounds.

SECTION 3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Warning!
 Combustible liquid and vapor.
 Harmful if swallowed.
 May causes eye irritation.
 Primrose yellow, high viscosity liquid. Mild odor.

EYE CONTACT
 Moderately irritating with redness, pain or tearing. Prolonged contact may cause burns

SKIN CONTACT
 Slightly irritating. Frequent or prolonged contact may irritate and cause a rash (dermatitis). Repeated exposure may cause allergic skin reactions. Once an allergy develops, even an exposure to a very small amount can trigger an allergic reaction.

INHALATION
 Slightly irritating to the eyes, nose, throat and lungs.

INGESTION
 May cause severe vomiting and diarrhea.

PRIMARY ROUTE OF EXPOSURE
 Skin contact, skin absorption, eye, inhalation, ingestion.

CARCINOGENICITY
 IARC - 2A Cadmium Sulfide
 OSHA - Not Listed
 NTP - 2 Cadmium Sulfide

TARGET ORGANS
 Ingredients may be toxic to the following organs: skin, eyes, lungs, mucous membranes.

SECTION 4. FIRST AID MEASURES

EYE CONTACT
 Flush eyes with flowing water for 10 to 15 minutes. Blink eyes frequently. Repeat flushing if burning or pain persists. Get immediate medical attention.

SKIN CONTACT
 Rinse skin immediately with plenty of water. Then wash skin immediately with soap and water. Remove contaminated clothing. Do not apply lotions or creams without the advice of a physician or poison center. If problems persist get prompt medical attention.

INHALATION
 Remove victim to fresh air. If breathing is difficult get immediate medical attention. If not breathing give artificial respiration and call for emergency medical assistance.

Distributed by:
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INGESTION

Do NOT induce vomiting. Give small amounts of water. Never give anything by mouth to an unconscious person. Contact a poison center or get immediate medical attention.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT

150.0 F 65.6 C

FLASH METHOD

SCC

EXTINGUISHING METHOD

Use carbon dioxide, foam or dry chemical.

FIRE FIGHTING PROCEDURES

Wear self contained breathing apparatus (pressure-demand MSA/NIOSH or equivalent) and full fire fighting protective gear.

FIRE AND EXPLOSION HAZARDS

No unusual fire or explosion hazards.

HAZARDOUS PRODUCTS/COMBUSTION

Not established.

SECTION 6. ACCIDENTAL RELEASE MEASURES

CLEAN UP

Remove ignition sources. Provide adequate ventilation and/or personal protective equipment (see Section 8). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Prevent runoff to storm sewers, ditches and other pathways to soil and waterways.

SECTION 7. HANDLING AND STORAGE

HANDLING

Avoid breathing fumes. Do not splash or spill. Do not store with incompatible materials. Store containers upright. Keep away from heat and flame.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use local exhaust ventilation.

EYE PROTECTION

Wear safety glasses with side shields or a face shield.

SKIN PROTECTION

Wear chemical resistant rubber gloves and apron.

RESPIRATORY PROTECTION

No respirator is required if ingredient exposure limits are not exceeded. An OSHA approved (29 CFR 1910.134 USA Dept. of Labor), air purifying, half-face respirator with the appropriate cartridge should be used if exposure limits are exceeded.

OTHER PROTECTION

A safety shower and eye wash station should be within reasonable distance of the work area.

EXPOSURE LIMITS/REGULATORY INFORMATION

SUBSTANCE DESCRIPTION	REG. AGENCY	PELTL	STEL/CELL
Polymer of Epoxy Resin & Bisphenol A	OSHA	N/D	N/DN/D
	ACGIH	N/D	N/DN/D
Diethylene Glycol Ethyl Ether Acetate	OSHA	N/D	N/DN/D
	ACGIH	N/D	N/DN/D
Cadmium Sulfide (as Cd)	OSHA	0.005 mg/m3	N/DN/D
	ACGIH	0.01* mg/m3	N/DN/D
Dipropylene Glycol Mono Methyl Ether	OSHA	100.0 ppm	N/DN/D
	ACGIH	100.0 ppm	N/DN/D
Barium Sulfate	OSHA	15.0** mg/m3	N/DN/D
	ACGIH	10.0 mg/m3	N/DN/D
Propylene Glycol Mono Methyl Ether Acetate	OSHA	N/D	N/DN/D
	ACGIH	N/D	N/DN/D
Zinc Sulfide	OSHA	N/D	N/DN/D
	ACGIH	N/D	N/DN/D
Solvent Naptha, Petroleum	OSHA	N/D	N/DN/D
	ACGIH	N/D	N/DN/D

*inhalable fraction ** total dust

LEGEND:

(EXPOSURE LIMIT DESCRIPTIONS)

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CELL = Ceiling Exposure Limit
PELTL = PEL/TLV
STEL = Short Term Exposure Limit
N/D = Not Determined
UNITS OF MEASURE:
PPM = Parts Per Million (Liquid)
MG/M3 = Milligrams Per Cubic Meter (Solid)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR

Primrose yellow, high viscosity liquid. Mild odor.

SPECIFIC GRAVITY

1.42

pH FACTOR

N/D

BOILING POINT

320 - 370 F N/D C

VOLATILE ORGANIC COMPOUNDS

VOC - % 27.3

VOC - g/L 388

VOC - lbs/Gal 3.24

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES

Oxidizing agents.

DECOMPOSITION

None

POLYMERIZATION

None.

CONDITIONS TO AVOID

Extreme temperatures.

STABILITY

Stable.

SECTION 11 TOXICOLOGICAL INFORMATION

EYE EFFECTS

Conjunctival irritation and redness. May cause corneal damage.

DERMAL EFFECTS

Slightly irritating. Absorption of toxic amounts through the skin is unlikely under ordinary conditions of industrial use. Emetic effects possible due to the cadmium content. Cadmium is very poorly absorbed from the gastrointestinal tract.

INHALATION EFFECTS

Minor irritation of the mucous membranes and the upper respiratory tract. 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 or female reproductive system.

INGESTION EFFECTS

Systemic effects are unlikely unless taken in massive amounts. Accidental ingestion of more than one ounce should be referred for medical evaluation.

ACUTE TOXICITY DATA

Enthone is not aware of any toxicity data on the specific mixture of chemical components contained in this product. Data on the individual chemical components of this mixture is available in the literature or can be obtained by contacting Enthone's Health, Safety, and Environmental Department at the address and telephone number listed in Section 1.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Enthone has not conducted specific studies on the ecotoxicity or environmental fate of this product. Commonly available data on certain ingredients indicate that acute or chronic effects could result from uncontrolled releases to soil, ground water, storm waters or air. Appropriate measures should be taken to prevent uncontrolled releases. Prompt containment and clean-up should be performed if releases do occur (see Section 6).

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Legal disposition of waste is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product.

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It is recommended that the following priority hierarchy be used when selecting a disposal method: (1) Reuse or reintroduction into the process. (2) Reclamation, regeneration or recycling. (3) Burning for energy recovery, or incineration, (4) Treatment.

SECTION 14. TRANSPORT INFORMATION**DOT/IATA PROPER SHIPPING NAME**

Ink Materials

DOT/IATA HAZARD CLASS

Not Regulated

DOT/IATA UN OR NA NUMBER

Not Regulated

DOT/IATA PACKING GROUP

Not Regulated

DOT/IATA LABEL

Not Regulated

DOT/IATA PLACARD

Not Regulated

SECTION 15. REGULATORY INFORMATION

Component Epoxy Resin is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)

Component Bisphenol A is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

Component Diethylene Glyc Eth is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

Component Cadmium Sulfide is subject to the following Environmental List
CA - California Prop 65
CERCLA - CERCLA Hazardous Substance
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

Component Barium Sulfate is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

Component Dipropylene Glycol Mono Methyl Ether is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)

Component Propylene Glycol Mono Methyl Ether Acetate is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

Component Zinc Sulfide is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)

Component Solvent Naptha, Petroleum is subject to the following Environmental List
311/312 SARA Phy/Hea Haz (40CFR370.40)
313 SARA toxic chem (40CFR372.65)

CALIFORNIA PROPOSITION 65
This product contains a chemical(s) known to the State of California to cause cancer.

SECTION 16. OTHER INFORMATION**HAZARDOUS MATERIALS ID. SYSTEM**

HMIS
Health 3
Fire 2
Reactivity 1

HAZARD RATING			
Least	0	Slight	1
Moderate	2	High	3
Extreme	4		

WHMIS HAZARD CLASS
B3, D2A

REVISION NO.
004

REVISION DATE
12/01/00

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REVISION SECTION / REASON

Section 2/ Composition change, Section 9/Update VOC data.

Created by:

HSE - Irvine, CA

Approved by:

HSE - Irvine, CA

Limitations and Disclaimer:

This MSDS relates only to the specific material identified in Section 2. In compiling this MSDS, Enthone has relied in good faith on information provided to Enthone by suppliers of the components of this material, and, in some cases, provided by independent data resources. Enthone has not independently verified such information and in addition, users should be aware that all materials may present unknown hazards. Use of this material in combination with other materials and/or in specific processes may render information set forth in this MSDS inaccurate or otherwise invalid.

NO WARRANTY, EXPRESS OR IMPLIED, IS MADE REGARDING THE INFORMATION FURNISHED ON THIS MSDS.

KEY TO ABBREVIATIONS:

EQ = Equal	LT = Less Than
AP = Approximately	GT = Greater Than
N/D = Not Determined	TR = Trace
ND = No Data Available	> - Greater Than
HSE = Health, Safety and Environmental	< - Less Than

