

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 CATALYST B-3 CATALYST

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

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

PRODUCT DESCRIPTION  
Amine Solution

GENERAL USE  
Catalyst for 50- & M-series Inks

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#
Tetraethylene Pentamine	15.0- 40.0	112-57-2
Hexanoic acid, 2-ethyl-, compd. With 2,4,6-tris[(dimethylamino)methyl]phenol	15.0- 40.0	51365-70-9
2,4,6-tris[(dimethylamino)methyl]phenol	7.0- 13.0	90-72-2
Ethylene Glycol Monobutyl Ether	30.0- 60.0	111-76-2

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 (1).  
See Section 8 of this MSDS for any noted exposure limits for these compounds.

### SECTION 3 HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

\*\*\*\*\*

Warning!  
Causes eye irritation.  
Harmful if swallowed.  
May be harmful if inhaled.  
May cause stomach irritation.  
Combustible liquid and vapor.  
Amber liquid. Amine odor.

\*\*\*\*\*

EYE CONTACT  
Severely irritating. May cause burns, redness, tearing, pain, or difficulty seeing.

SKIN CONTACT  
Moderately irritating. Prolonged contact may cause burns. 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  
Moderately irritating to eyes, nose, throat and lungs. Repeated exposure may cause an allergic reaction of the respiratory system. Once an allergy develops, even an exposure to a very small amount can trigger an allergic reaction.

INGESTION  
Severely irritating to the mouth, stomach, and digestive tract. May cause vomiting. May burn mouth, throat and stomach.

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

CARCINOGENICITY  
IARC - Not Listed  
OSHA - Not Listed  
NTP - Not Listed

TARGET ORGANS  
Ingredients may be toxic to the following organs:  
Skin, eyes, lungs, and 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 immediately with plenty of water. Remove contaminated clothing. If problems persist get immediate medical attention. Do not apply lotions or creams without the advice of a physician or poison center.

INHALATION

Distributed by:  
**NAZDAR**  
8501 Hedge Lane Terrace  
Shawnee, KS 66227  
Phone: 800-677-4657  
www.nazdar.com

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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.

**INGESTION**

Do NOT induce vomiting. Rinse mouth with water and allow patient to drink as much water as desired. Contact a poison center or get prompt medical attention if symptoms of irritation persist

**SECTION 5. FIRE FIGHTING MEASURES**

**FLASH POINT**  
 165.00 F

**FLASH METHOD**  
 S.C.C.

**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**  
 Heat in excess of flashpoint, open flame or storage with incompatible materials as listed in Stability And Reactivity.

**HAZARDOUS PRODUCTS/COMBUSTION**  
 Not established.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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.

**STORAGE**  
 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	CEIL
Tetraethylene Pentamine	OSHA ACGIH	N/D N/D	N/D N/D	N/D N/D
Hexanoic acid, 2-ethyl-, compd. With 2,4,6-tris[(dimethylamino)methyl]pheno	OSHA ACGIH	N/D N/D	N/D N/D	N/D N/D
2,4,6-tris[(dimethylamino)methyl]phenol	OSHA ACGIH	N/D N/D	N/D N/D	N/D N/D
Ethylene Glycol Monobutyl Ether	OSHA ACGIH	25.0 25.0	N/D 75.0	N/D N/D

**LEGEND:**

**EXPOSURE LIMIT DESCRIPTIONS**  
 CEIL Ceiling Exposure Limit  
 PELTL PEL/TLV  
 STEL Short Term Exposure Limit  
 N/D = Not Determined  
 UNIT OF MEASURE

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PPM Parts Per Million (Liquid)  
MG/M3 Milligrams Per Cubic Meter (Solid)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR

Amber liquid with amine odor.

SPECIFIC GRAVITY

0.96

pH FACTOR

N/D

BOILING POINT

320.00 F 160.00 C

VOLATILE ORGANIC COMPOUNDS

Before use this product must be mixed with another Enthone product.  
To obtain VOC data on mixture call (949) 757-0111 or fax (949) 757-0248.

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 possible corneal burns due to the alkaline amines present.

DERMAL EFFECTS

Caustic burns possible depending on contact time. Although no specific testing may have been on the amine(s) in this product all aliphatic and alicyclic amines should be considered as potential skin sensitizers.

INHALATION EFFECTS

Although no specific testing may have been done on the amine(s) contained in this product, all aliphatic and alicyclic amines should be considered as potential pulmonary sensitizers.

Several rat studies demonstrated no effect for the glycol ether(s) contained in this products on the testes of rats and nonsignificant reversible effects in one study. Studies in pregnant rats showed contradictory embryo and feto toxic effects at 100 - 200 ppm. All studies showed that in doses not toxic to the mother, there are no feto-embryo or teratogenic effects.

INGESTION EFFECTS

Numbness of the nerve endings of the tongue and other parts of the mouth may make mask symptoms of a significant burn. Absorption of significant amounts may result in unconsciousness, and rupture of red blood cells. Ingestion of more than 2 ounces may be fatal.

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 wastes 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.

It is recommended that the following priority hierarchy be used when selecting a disposal method: 1) Reuse or reintroduction into the

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process. (2) Reclamation, regeneration or recycling. (3) Burning for energy recovery, or incineration. (4) Treatment.

**SECTION 14. TRANSPORT INFORMATION**

**DOT/IATA PROPER SHIPPING NAME**

Corrosive liquid, basic, organic, n.o.s. (Primary Aliphatic Amine)

**DOT/IATA HAZARD CLASS**

8

**DOT/IATA UN OR NA NUMBER**

UN3267

**DOT/IATA PACKING GROUP**

III

**DOT/IATA LABEL**

Corrosive

**DOT/IATA PLACARD**

Corrosive

**SECTION 15. REGULATORY INFORMATION**

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

Component Hexanoic acid, 2-ethyl-, comp. With 2,4,6-tris[(dimethylamino)methyl]phenol 2, 4, 6, - Tris Dime is subject to the following Environmental List  
 311/312 SARA Phy/Hea Haz (40CFR370.40)

Component 2,4,6-tris[(dimethylamino)methyl]phenol is subject to the following Environmental List  
 311/312 SARA Phy/Hea Haz (40CFR370.40)

Component Ethylene Glycol Monobutyl Ether 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		HAZARD RATING			
Health	3	Least	0	Slight	1
Fire	2	Moderate	2	High	3
Reactivity	1	Extreme	4		

**WHMIS HAZARD CLASS**

B3, D2B, E

**REVISION NO.**

001

**REVISION DATE**

11/05/1996

**REVISION SECTION / REASON**

Section 2 / GENERAL USE changed.

Section 14 / DOT PROPER SHIPPING NAME, UN NUMBER, and PACKING GROUP changed

**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

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AP=Approximately  
N/D=Not Determined  
HSE=Health, Safety and Environmental

GT=Greater Than  
TR=Trace  
<=Less Than

