



Revision Date: 03/09/2006

Issue date: 03/18/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite(R) Encap(R) 3164 Epoxy Hardener
Product type: Epoxy Hardener
Company address: Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 39968
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Bis (2-ethylhexyl) phthalate 117-81-7	30-60	5 mg/m ³ TWA	5 mg/m ³ TWA	None
Nonylphenol 84852-15-3	10-30	None	None	None
N-(2-Aminoethyl)piperazine 140-31-8	10-30	None	None	None
Triethylenetetramine 112-24-3	5-10	None	None	1 ppm, skin TWA, (WEEL)
Aminoethylethanolamine 111-41-1	1-5	None	None	None
Hydroxyethylpiperazine 103-76-4	1-5	None	None	None
Diethylene triamine 111-40-0	1-5	1 ppm TWA (skin)	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Low viscosity liquid
Color: Amber
Odor: Ammoniacal

HEALTH: 3*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Respiratory tract burns. May cause allergic respiratory reaction. May cause sensitization by inhalation. Shortness of breath. Coughing.
Skin contact: Causes skin burns. Tissue damage. May be harmful if absorbed through skin. Allergic skin reaction. May cause sensitization by skin contact. Pain and discomfort. Rash. Redness. Itching.

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Eye contact: Causes eye burns. Tissue damage. Corneal edema may give appearance of "blue haze" or "fog" around lights. Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. Blurred vision. Pain and discomfort. Stinging. Excess tearing.

Ingestion: May be harmful if swallowed. Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract if swallowed. May cause an aspiration hazard if swallowed. Aspirated material can enter the lungs and result in pneumonitis.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders. Asthma. Respiratory allergies. Skin allergies.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Remove contaminated clothing and shoes. Immediately flush skin with plenty of water (using soap, if available). Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms develop and persist.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms develop and persist.

5. FIRE-FIGHTING MEASURES

Flash point: 118.33°C (245°F) Closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: Not available

Flammable/Explosive limits-upper %: Not available

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon. Organic compounds. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Remove all sources of ignition. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Keep container closed. Wash thoroughly after handling.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Recommend using Polyvinyl chloride gloves. Butyl rubber gloves. Nitrile gloves.
Eye/face protection:	Chemical splash goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Low viscosity liquid
Color:	Amber
Odor:	Ammoniacal
Vapor pressure:	0.2 mmHg
pH:	Not applicable
Boiling point/range:	Greater than 149°C (300°F)
Melting point/range:	Not available
Specific gravity:	1.0
Vapor density:	1.0
Evaporation rate:	Less than 0.1 (Ether = 1)
Solubility in water:	Soluble.
Partition coefficient (n-octanol/water):	Not available
VOC content:	<1%; <10 grams/liter (estimated)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous polymerization:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Organic compounds. Oxides of nitrogen.
Incompatibility:	Strong oxidizing agents.
Conditions to avoid:	Heat, flames and sparks. Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Bis (2-ethylhexyl) phthalate 117-81-7	Suspect Carcinogen	No	Yes
Nonylphenol 84852-15-3	No	No	No
N-(2-Aminoethyl)piperazine 140-31-8	No	No	No
Triethylenetetramine 112-24-3	No	No	No
Aminoethylethanolamine 111-41-1	No	No	No
Hydroxyethylpiperazine 103-76-4	No	No	No
Diethylene triamine 111-40-0	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Bis (2-ethylhexyl) phthalate 117-81-7	Some evidence of carcinogenicity, Reproductive, Liver, Kidney, Developmental, Central nervous system
Nonylphenol 84852-15-3	Irritant, Corrosive
N-(2-Aminoethyl)piperazine 140-31-8	Irritant, Corrosive, Allergen
Triethylenetetramine 112-24-3	Allergen, Developmental, Irritant, Mutagen, Corrosive
Aminoethylethanolamine 111-41-1	Allergen, Irritant
Hydroxyethylpiperazine 103-76-4	Allergen, Central nervous system, Irritant
Diethylene triamine 111-40-0	Allergen, Eyes, Irritant

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of 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. Do not dispose of in an uncontrolled manner.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Nonylphenol , Aminoethylpiperazine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: II
Exceptions: (Not more than 1 Liter) Consumer Commodity ORM-D

International Air Transportation (ICAO/IATA):

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Nonylphenol , Aminoethylpiperazine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: II

Water Transportation (IMO/IMDG):

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Nonylphenol , Aminoethylpiperazine)

Item No. : 39968

Product name: Loctite(R) Encap(R) 3164 Epoxy Hardener

Hazard class or division: 8
Identification number: UN 2735
Packing group: II
Marine pollutant: Nonylphenol

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Bis (2-ethylhexyl) phthalate (CAS#117-81-7).

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B, E

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

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