Revision Number: 002.1

Issue date: 12/29/2009

1. PRODUCT AND COMPANY IDENTIFICATION

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

IDH number: 233577
Item number: 39970
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state:	Low viscosity, Liquid	**HEALTH:**	*3
Color:	Amber	**FLAMMABILITY:**	1
Odor:	Ammoniacal	**PHYSICAL HAZARD:**	0
		Personal Protection:	See MSDS Section 8

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

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

Potential Health Effects

Inhalation: Respiratory tract burns. May cause allergic respiratory reaction. Shortness of breath. Coughing.

Skin contact: Causes skin burns. Tissue damage. May be harmful if absorbed through skin. Allergic skin reaction.

Eye contact: Causes eye burns. Tissue damage. Corneal edema may give appearance of "blue haze" or "fog" around lights. 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.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Di(2-ethylhexyl)phthalate	117-81-7	30 - 60
4-Nonylphenol, branched	84852-15-3	10 - 30
N-Aminoethylpiperazine	140-31-8	10 - 30
Triethylenetetramine	112-24-3	5 - 10
2-(2-Aminoethylamino)ethanol	111-41-1	1 - 5
Diethylenetriamine	111-40-0	1 - 5
1-Piperazineethanol	103-76-4	1 - 5

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	118.33 °C (244.99 °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 firefighting 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

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
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.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Di(2-ethylhexyl)phthalate	5 mg/m3 TWA	5 mg/m3 TWA	None	None
4-Nonylphenol, branched	None	None	None	None
N-Aminoethylpiperazine	None	None	None	None
Triethylenetetramine	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
2-(2-Aminoethylamino)ethanol	None	None	None	None
Diethylenetriamine	1 ppm TWA (SKIN)	None	None	None
1-Piperazineethanol	None	None	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Low viscosity, Liquid
Color: Amber
Odor: Ammoniacal
Odor threshold: Not available
pH: Not available
Vapor pressure: 0.2 mm hg
Boiling point/range: > 149 °C (> 300.2 °F)
Melting point/ range: Not available
Specific gravity: 1
Vapor density: 1.0
Flash point: 118.33 °C (244.99 °F) Closed cup
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: < 0.1 (Ether = 1)
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 1 %; < 10 g/l Estimated

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous reactions: None under normal processing.

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

Incompatible materials: Strong oxidizing agents.

Conditions to avoid: Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Di(2-ethylhexyl)phthalate	Anticipated carcinogen.	No	No
4-Nonylphenol, branched	No	No	No
N-Aminoethylpiperazine	No	No	No
Triethylenetetramine	No	No	No
2-(2-Aminoethylamino)ethanol	No	No	No
Diethylenetriamine	No	No	No
1-Piperazineethanol	No	No	No

Hazardous components	Health Effects/Target Organs
Di(2-ethylhexyl)phthalate	Central nervous system, Developmental, Kidney, Liver, Reproductive, Some evidence of carcinogenicity
4-Nonylphenol, branched	Irritant, Corrosive
N-Aminoethylpiperazine	Irritant, Corrosive, Allergen
Triethylenetetramine	Allergen, Corrosive, Developmental, Irritant, Mutagen
2-(2-Aminoethylamino)ethanol	Irritant, Allergen
Diethylenetriamine	Allergen, Irritant, Eyes
1-Piperazineethanol	Allergen, Central nervous system, Irritant

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

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

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III
Marine pollutant: Nonylphenol

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III
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 above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
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). Di(2-ethylhexyl)phthalate (CAS# 117-81-7).
CERCLA Reportable quantity:	Di(2-ethylhexyl)phthalate (CAS# 117-81-7) 100 lbs. (45.4 kg)
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian 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.

Prepared by: Gary Pierson, Manager, Regulatory Affairs

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