



Revision Number: 005.0

Issue date: 08/13/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE EA 3472 STEEL LIQ known as Loctite(R) Fix(R) Steel Liquid	IDH number:	702244
Product type:	Epoxy resin	Item number:	97483_10256000
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Avoid breathing dust or fumes. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.

Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Diiron trioxide	1309-37-1	30 - 60
Epoxy resin	Proprietary	30 - 60
Neopentyl glycol diglycidyl ether	17557-23-2	1 - 5
Manganese	7439-96-5	0.1 - 1
Gamma-glycidoxypropyl trimethoxysilane	2530-83-8	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, 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. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

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. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). In case of fire, keep containers cool with water spray. Caution should be exercised when using water or foam as frothing may occur.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Acids. Phenolics. Toxic fumes. Aldehydes. Irritating organic fragments.

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:	Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. 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 partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

Storage: Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Store away from heat, sparks, flames, or other sources of ignition.

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 Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Diiron trioxide	5 mg/m ³ TWA Respirable fraction.	10 mg/m ³ PEL Fume.	None	None
Epoxy resin	None	None	None	None
Neopentyl glycol diglycidyl ether	None	None	None	None
Manganese	0.1 mg/m ³ TWA (as Mn) Inhalable fraction. 0.02 mg/m ³ TWA (as Mn) Respirable fraction.	5 mg/m ³ Ceiling (as Mn) Fume.	None	None
Gamma-glycidoxypropyl trimethoxysilane	None	None	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

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: Paste

Color: Gray

Odor: Mild

Odor threshold: Not available.

pH: Not available.

Vapor pressure: Not applicable

Boiling point/range: Not applicable

Melting point/ range: Not available.

Specific gravity: 2.352

Vapor density: > 1 (Air = 1)

Flash point: 204 °C (399.2 °F) Pensky Martens closed cup

Flammable/Explosive limits - lower: Not available.

Flammable/Explosive limits - upper: Not available.

Autoignition temperature: Not available.

Evaporation rate: Less than butyl acetate.

Solubility in water: Insoluble

Partition coefficient (n-octanol/water): Not available.

VOC content: < 1.0 %; < 10 g/l (value for resin and hardener together) (estimated)

Viscosity: Not available.

Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing.

Hazardous decomposition products: Oxides of carbon. Acids. Phenolics. Aldehydes. Toxic fumes. Irritating vapors.

Incompatible materials: Strong oxidizing agents. Strong Lewis acids. Strong mineral acids. Strong bases. Amines. Mercaptans. Strong alkalis.

Reactivity: Not available.

Conditions to avoid: Keep away from heat, ignition sources and incompatible materials.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system. Central nervous system effects.

Skin contact: Causes skin irritation. May cause allergic skin reaction. May cause central nervous system effects.

Eye contact: Causes serious eye irritation.

Ingestion: May cause gastrointestinal tract irritation if swallowed. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Diiron trioxide	None	Allergen, Cardiac, Central nervous system, Irritant, Kidney, Liver, Lung
Epoxy resin	None	Allergen, Irritant
Neopentyl glycol diglycidyl ether	None	Allergen, Blood, Bone Marrow, Immune system, Irritant, Reproductive
Manganese	None	Immune system, Irritant, Lung, Nervous System, Reproductive, Respiratory
Gamma-glycidoxypropyl trimethoxysilane	None	Allergen, Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Diiron trioxide	No	No	No
Epoxy resin	No	No	No
Neopentyl glycol diglycidyl ether	No	No	No
Manganese	No	No	No
Gamma-glycidoxypropyl trimethoxysilane	No	No	No

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

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

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

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrin resin

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 minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: None above reporting de minimis
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/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

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

Prepared by: Rena Petrides, Regulatory Affairs Specialist
Issue date: 08/13/2014

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