Material Safety Data Sheet

Revision Number: 002.0 **Issue date:** 11/21/2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **Loctite(R) 3414 Structural ADH**
Product type: Tough acrylic

IDH number: 702047
Item number: 32512_209781
Region: United States

Company address:
Henkel Corporation
1001 Trout Brook Crossing
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: Liquid
Color: Milky white
Odor: Pungent, Acrylic

HEALTH: *2
FLAMMABILITY: 3
PHYSICAL HAZARD: 1
Personal Protection: See MSDS Section 8

WARNING: FLAMMABLE LIQUID AND VAPOR.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May be harmful if inhaled. Moderate respiratory tract irritation. Shortness of breath. Coughing.
Skin contact: May cause allergic skin reaction. May be harmful if absorbed through skin. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness. Excess tearing.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

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	%
Methyl methacrylate	80-62-6	30 - 60
Methacrylic acid	79-41-4	5 - 10
Benzenesulfonyl chloride, 4-methyl-	98-59-9	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
2,6-Di-tert-butyl-p-cresol	128-37-0	1 - 5
Ethylene glycol	107-21-1	0.1 - 1

4. FIRST AID MEASURES

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

Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
Eye contact:	Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	10.56 °C (51.01 °F) Tagliabue closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits - lower:	2.1 % (Methyl Methacrylate)
Flammable/Explosive limits - upper:	12.5 % (Methyl Methacrylate)
Extinguishing media:	Dry chemical.
Special firefighting procedures:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back. Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. Methylene bisphenyl isocyanate. Hydrocarbons. Acrid smoke and fumes. Cyclopentanone. Tetrahydrofuran.

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. Immediately contact emergency personnel. Keep unnecessary personnel away. Ventilate area. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling:	Keep away from heat, spark and flame. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not taste or swallow. Use only with adequate ventilation. Keep container closed.
Storage:	For safe storage, store at or below 37.8 °C (100°F) 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
Methyl methacrylate	50 ppm TWA 100 ppm STEL (Sensitizer.)	100 ppm (410 mg/m3) TWA	None	50 ppm
Methacrylic acid	20 ppm TWA	None	None	None
Benzenesulfonyl chloride, 4-methyl-	None	None	5 mg/m3 Ceiling	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
2,6-Di-tert-butyl-p-cresol	2 mg/m3 TWA Inhalable fraction and vapor.	None	None	None
Ethylene glycol	100 mg/m3 Ceiling Aerosol.	None	None	None

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).

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

Skin protection: Chemical resistant, impermeable gloves. Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Milky white
Odor: Pungent, Acrylic
Odor threshold: Not available
pH: Not available
Vapor pressure: 29 mm Hg (20 °C (68°F))
Boiling point/range: 101.1 °C (214°F) Estimated
Melting point/ range: Not available
Specific gravity: 0.97 - 1.0
Vapor density: > 1 Heavier than air
Flash point: 10.56 °C (51.01 °F) Tagliabue closed cup
Flammable/Explosive limits - lower: 2.1 % (Methyl Methacrylate)
Flammable/Explosive limits - upper: 12.5 % (Methyl Methacrylate)
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 1.98 %; 1.92 g/l (Adhesive and Activator mixed)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: May occur with excessive aging, excessive heat, polymerization catalyst, inhibitor depletion, direct sunlight and under oxygen-free atmospheres.

Hazardous decomposition products: None known

Incompatible materials: Oxidizing agents. Reducing agents. Strong acids. Strong bases. Amines. Moisture. Alkalis.

Conditions to avoid: Keep away from heat, spark and flame. UV light. Exposure to sunlight. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Methyl methacrylate	No	No	No
Methacrylic acid	No	No	No
Benzenesulfonyl chloride, 4-methyl-	No	No	No
Cumene hydroperoxide	No	No	No
2,6-Di-tert-butyl-p-cresol	No	No	No
Ethylene glycol	No	No	No

Hazardous components	Health Effects/Target Organs
Methyl methacrylate	Allergen, Irritant, Kidney, Liver, Mutagen, Nervous System, Respiratory
Methacrylic acid	Corrosive, Irritant, Allergen
Benzenesulfonyl chloride, 4-methyl-	Irritant, Allergen, Corrosive
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
2,6-Di-tert-butyl-p-cresol	Irritant, Mutagen
Ethylene glycol	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: D001: Ignitable. D003: Reactive.

14. TRANSPORT INFORMATION

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

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II
DOT Reportable quantity: alpha,alpha-Dimethylbenzylhydroperoxide, Methyl methacrylate
Exceptions: (Not more than 5 L), Consumer Commodity, ORM-D

International Air Transportation (ICAO/IATA)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II

Exceptions:	(Not more than 500 ml), May Qualify as Consumer Commodity, ID8000

Water Transportation (IMO/IMDG)

Proper shipping name:	ADHESIVES
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

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, Fire, Reactive
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). Cumene hydroperoxide (CAS# 80-15-9). Methyl methacrylate (CAS# 80-62-6).
CERCLA Reportable quantity:	Methyl methacrylate (CAS# 80-62-6) 1,000 lbs. (454 kg) Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 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:	Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.
WHMIS hazard class:	B.2, D.2.A, D.2.B

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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