



Revision Number: 006.1

Issue date: 01/28/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE UR 4431 known as Macroplast B 4431
Product use: Adhesive
Company address: Henkel Canada Corporation
 2515 Meadowpine Boulevard
 Mississauga, Ontario L5N 6C3

IDH number: 747886
Region: Canada
Contact information:
 Telephone: 905.814.6511
 MEDICAL EMERGENCY Phone: Poison Control Center
 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

This product is for industrial use only.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Cream
Odor: Solvent

WHMIS hazard class: B.2, D.2.A, D.2.B

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR.
 VAPOR MAY CAUSE FLASH FIRE.
 MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.
 CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

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

Potential Health Effects

Inhalation: May cause irritation to nose and throat. Central nervous system depression, including dizziness, drowsiness, fatigue, nausea, headache, unconsciousness. May cause allergic respiratory reaction. Harmful if inhaled.
Skin contact: May cause irritation due to defatting of the skin. May cause allergic skin reaction.
Eye contact: May cause severe eye irritation.
Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspirated material can enter the lungs and result in pneumonitis.

Existing conditions aggravated by exposure: Pre-existing skin, respiratory, central nervous system, liver and kidney conditions may be susceptible.

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Acetone	67-64-1	30 - 60
Toluene	108-88-3	10 - 30

4. FIRST AID MEASURES

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

Skin contact:	Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. Get immediate medical attention.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate 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 immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	-16.1 °C (3.02 °F)
Autoignition temperature:	Not determined
Flammable/Explosive limits - lower:	1.7 % (Toluene)
Flammable/Explosive limits - upper:	7.1 % (Toluene)
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Firefighters should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.
Unusual fire or explosion hazards:	Overexposure to decomposition products may cause a health hazard.
Hazardous combustion products:	Oxides of carbon. Acrid smoke and fumes.
Sensitivity to Mechanical Impact:	Not available.
Sensitivity to static discharge:	Electrostatic charge may build-up during handling. Grounding of equipment is recommended.

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:	Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Do not allow product to enter sewer or waterways.
Clean-up methods:	Do not allow material to contaminate ground water system. Store in a closed metal container until ready for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. Isolate area. Keep unnecessary personnel away.

7. HANDLING AND STORAGE

Handling:	Make sure containers are properly grounded before use or transfer of material. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not cut, grind, weld, or drill on or near this container.
Storage:	For safe storage, store between 0 °C (32°F) and 46 °C (114.8 °F)

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

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
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m ³) PEL	None	None
Toluene	20 ppm TWA	200 ppm TWA 300 ppm Ceiling 500 ppm MAX. CONC 10 minutes	None	None

Engineering controls:	Ensure adequate ventilation, especially in confined areas. 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). Observe OSHA regulations for respirator use (29 CFR 1910.134).
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.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Cream
Odor:	Solvent
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	Not determined
Boiling point/range:	54 - 112 °C (129.2 - 233.6 °F)
Melting point/ range:	Not determined
Specific gravity:	0.9
Vapor density:	Heavier than air.
Flash point:	-16.1 °C (3.02 °F)
Flammable/Explosive limits - lower:	1.7 % (Toluene)
Flammable/Explosive limits - upper:	7.1 % (Toluene)
Autoignition temperature:	Not determined
Evaporation rate:	Slower than diethyl ether.
Solubility in water:	Not soluble
Partition coefficient (n-octanol/water):	Not determined
VOC content:	88 %

10. STABILITY AND REACTIVITY

Stability:	Normally stable.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Burning, including when heated by welding or cutting, will produce smoke, carbon monoxide and carbon dioxide.
Incompatible materials:	Strong acids and strong bases.
Conditions to avoid:	Avoid excessive heat (>46°C (>115°F)) and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Toxicologically synergistic products:	Not available.
--	----------------

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)	ACGIH Carcinogen
Acetone	No	No	No	Group A4
Toluene	No	No	No	Group A4

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
Toluene	Oral LD50 (RAT) = 2.6 g/kg Oral LD50 (RAT) = 5,000 mg/kg Dermal LD50 (RABBIT) = 12,124 mg/kg Inhalation LC50 (RAT, 1 h) = 26700 ppm Inhalation LC50 (RAT, 2 h) = 12200 ppm Inhalation LC50 (RAT, 4 h) = 8000 ppm	Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. 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.

14. TRANSPORT INFORMATION

Canada Transportation of Dangerous Goods - Ground

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

International Air Transportation (ICAO/IATA)

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

Water Transportation (IMO/IMDG)

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

15. REGULATORY INFORMATION

Canada Regulatory Information

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

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.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Reviewed MSDS. Reissued with new date.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: J. Boryszewski, Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.