chanhvinh.com

Safety Data Sheet

Revision Number: 004.1

Issue date: 04/03/2025

1. IDENTIFICATION

Product name: **LOCTITE UK 3173 RES known as 3173 POLYURETHANE RESIN/ISOCY.**

IDH number: 233605

Product type/ Recommended use: Part A for 2-K-Polyurethane adhesive and sealant

Item number: 39985

Restriction of Use: None identified

Region: Canada

Company address:
Henkel Canada Corporation
Meadowpine Boulevard 2515
Mississauga, Ontario L5N 6C3

Contact information:
Telephone: +1 (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
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

2. HAZARDS IDENTIFICATION

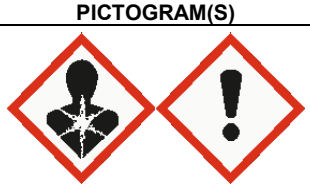
EMERGENCY OVERVIEW

DANGER:

H315 - CAUSES SKIN IRRITATION.
H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
H319 - CAUSES SERIOUS EYE IRRITATION.
H332 - HARMFUL IF INHALED.
H334 - MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
H372 - CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY INHALATION	4
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

PICTOGRAM(S)



Precautionary Statements

Prevention:

P260 - Do not breathe vapors, mist, or spray.
P264 - Wash affected area thoroughly after handling.

chanhvinh.com

	P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves, eye protection, and face protection. P284 - [In case of inadequate ventilation] wear respiratory protection.
Response:	P302+P352 - IF ON SKIN: Wash with plenty of water. P304+P340+P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 - If skin irritation or rash occurs: Get medical attention. P337+P313 - If eye irritation persists: Get medical attention. P342+P311 - If experiencing respiratory symptoms: Call a poison center or physician. P362+P364 - Take off contaminated clothing and wash it before reuse.
Storage:	Not prescribed
Disposal:	P501 - Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Other hazards Not available.

Classification complies with Canadian Hazardous Products Regulations and is consistent with the provision 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	Weight %*
Methylenebis(phenylisocyanate)	101-68-8	30 - 60
Polymeric diphenylmethane diisocyanate	9016-87-9	30 - 60
Methylene bisphenyl isocyanate	26447-40-5	10 - 30
o-(p-Isocyanatobenzyl)phenyl isocyanate	5873-54-1	1 - 5

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

First Aid Measures by likely routes of exposure

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposure, seek medical attention if irritation develops or persists after area is washed. Wash clothing before reuse.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

chanhvinh.com

Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
Most important symptoms and effects (acute and delayed):	The most important known symptoms and effects, both acute and delayed, are described in Section 11: Toxicological Information.
Indication of any immediate medical attention / special treatment needed:	Eyes:Stain for evidence of corneal injury.If cornea is burned, instill antibiotic steroid preparation frequently.Workplace vapors have produced reversible corneal epithelial edema impairing vision.Skin:This compound is a known skin sensitizer.Treat symptomatically as for contact dermatitis or thermal burns.Ingestion:Treat symptomatically.There is no specific antidote.Inducing vomiting is contraindicated because of the irritating nature of this compound.Respiratory:This compound is a known pulmonary sensitizer.Treat symptomatically and supportively.An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide.
Improper extinguishing agents:	Not available.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures above 204.4°C (400°F), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible.
Unusual fire or explosion hazards:	Sealed containers at elevated temperatures or contaminated with water may rupture explosively. Water or fog may cause frothing which can be violent especially if sprayed into containers of hot or burning liquid. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Isocyanates. Toxic fumes. Hydrogen cyanide.

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. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over spill. Large quantities may be pumped into closed, but not sealed containers for disposal. For minor spills, absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well ventilated area (outside) and treat with neutralizing solution: mixture of 80% water and 20% non-ionic surfactant Tergitol TMN-10; or 90% water, 3-8% concentrated ammonia and 2% detergent. Add about ten parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let carbon dioxide escape. Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

chanhvinh.com

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Exposure to vapors of heated MDI can be extremely dangerous. Use only with adequate ventilation. Protect from moisture. Keep container closed. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard. Refer to Section 8.

Storage:

For safe storage, store between 18 °C (64.4 °F) and 30 °C (86°F)
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. Do not let moisture contaminate this material. Product reacts with water to release carbon dioxide, which could build up pressure in closed containers and lead to bursting. Do not reseal if moisture contamination is suspected. MDI reacts slowly with water to form carbon dioxide gas. This gas can cause sealed containers to expand and possibly rupture. If container is exposed to high heat (204.4 °C (400 °F)), it can be pressurized and possibly rupture.

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 Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Methylenebis(phenylisocyanate)	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None
Methylene bisphenyl isocyanate	0.005 ppm TWA	None	None	None

Engineering controls:

Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation. Air monitoring: Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Isocyanate exposure levels must be monitored. Monitoring techniques have been developed by NIOSH and OSHA. Medical Surveillance: Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include preemployment and periodic medical examinations with pulmonary function tests (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

Respiratory protection:

Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A positive pressure, supplied-air respirator or a self-contained breathing apparatus is recommended. In situations where MDI is not sprayed, heated, or used in a poorly ventilated area, and a supplied-air or self-contained breathing apparatus is unavailable or its use impractical, at least an air-purifying cartridge and particulate pre-filters must be worn.
However, this should be permitted only for short periods of time (less than one hour) at relatively low concentrations (at or near the TLV). However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

chanhvinh.com

Eye/face protection:	Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing. 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. Vapor resistant goggles should be worn when contact lenses are in use.
Skin protection:	Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). Neoprene gloves. However, please note that polyvinyl alcohol degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum. Safety showers and eye wash stations should be available. Educate and train employees in safe use of product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Brown
Odor:	Mild
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	< 0.0001 mm hg (25 °C (77°F))
Boiling point/range:	> 200 °C (> 392°F)1,013 hPa
Melting point/ range:	Not available.
Density/Relative density:	1.21
Density/Relative density:	1.21
Relative vapor density:	Not available.
Flash point:	> 200 °F (> 93.33 °C) Setaflash Closed Cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility:	Reacts slowly with water to liberate carbon dioxide gas. Water
Partition coefficient n-octanol/water (logarithmic value):	Not available.
VOC content:	Not available.
Dynamic viscosity:	Not available.
Kinematic viscosity:	Not available.
Particle characteristics:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.
Hazardous decomposition products:	Irritating organic vapours. Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. MDI vapors and aerosols. Isocyanates.
Incompatible materials:	Water, amines, alkalis and alcohols. Will cause some corrosion of copper alloys and aluminum. Strong acids and strong bases. Ammonia.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Contamination with water.

11. TOXICOLOGICAL INFORMATION

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

chanhvinh.com

Potential Health Effects/Symptoms

Inhalation: May cause sensitization by inhalation.
Skin contact: Causes skin irritation.
Eye contact: Causes serious eye irritation.
Ingestion: May be harmful if swallowed.

Hazardous Component(s)	LD50s and LC50s
Methylenebis(phenylisocyanate)	None
Polymeric diphenylmethane diisocyanate	None
Methylene bisphenyl isocyanate	None
o-(p-Isocyanatobenzyl)phenyl isocyanate	Inhalation LC50 (Rat, 4 h) = 645 mg/m3 Inhalation LC50 (Rat, 4 h) = 0.49 mg/l Inhalation LC50 (Rat, 4 h) = 310 mg/m3 Inhalation LC50 (Rat, 4 h) = 387 mg/m3

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Methylenebis(phenylisocyanate)	Irritant	Allergen	Respiratory
Polymeric diphenylmethane diisocyanate	Irritant	Allergen	Kidney Liver Respiratory
Methylene bisphenyl isocyanate	Irritant	Allergen	Mutagen Respiratory
o-(p-Isocyanatobenzyl)phenyl isocyanate	Irritant	Allergen	Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Methylenebis(phenylisocyanate)	No	No	No
Polymeric diphenylmethane diisocyanate	No	No	No
Methylene bisphenyl isocyanate	No	No	No
o-(p-Isocyanatobenzyl)phenyl isocyanate	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.

14. TRANSPORT INFORMATION

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

Canada Transportation of Dangerous Goods - Ground

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

International Air Transportation (ICAO/IATA)

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

chanhvinh.com

Water Transportation (IMO/IMDG)

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

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 as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

16. OTHER INFORMATION

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

Prepared by: Product Safety and Regulatory Affairs

Issue date: 04/03/2025

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.

This Safety Data Sheet has been generated based on the Canadian Hazardous Products Regulations (WHMIS 2015) and provides information in accordance with Canadian law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.