Revision Number: 004.1

Issue date: 10/25/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOCTITE PC 5070 TAPE known as Pipe Repair Kit TAPE**

IDH number: 702198

Product type: Polyurethane adhesive

Item number: 96321_314086

Restriction of Use: None identified

Region: United States

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

Contact information:
Telephone: +1 (860) 571-5100
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**:**

HARMFUL IF SWALLOWED.
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	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: Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. In case of inadequate ventilation wear respiratory protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Take off contaminated clothing.

Storage: Not prescribed

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*
Glass, oxide, chemicals	65997-17-3	60 - 70
Polypropylene glycol 4,4-diphenylmethane diisocyanate prepolymer	9048-57-1	20 - 30
Methylenebis(phenylisocyanate)	101-68-8	5 - 10
Polymeric diphenylmethane diisocyanate	9016-87-9	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1

* Exact percentages may vary or are 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. Get medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult a physician should this development occur.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. 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.

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. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms: See Section 11.

Notes to physician: 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.

5. FIRE FIGHTING MEASURES

Extinguishing media: Foam, dry chemical or carbon dioxide.

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. In case of fire, keep containers cool with water spray.
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. Hydrogen cyanide. Irritating organic vapours. Isocyanates.

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. 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. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. 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. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard. Do not taste or swallow. Protect from moisture. Refer to Section 8.
Storage:	For safe storage, store between 0 °C (32°F) and 40 °C (104°F) Store in tightly closed containers to prevent moisture contamination. 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 reseal if contamination is suspected. If container is exposed to high heat (204.4 °C (400 °F)), it can be pressurized and possibly rupture. MDI reacts slowly with water to form carbon dioxide gas. This gas can cause sealed containers to expand and possibly rupture.

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
Glass, oxide, chemicals	None	None	None	None
Polypropylene glycol 4,4-diphenylmethane diisocyanate prepolymer	None	None	None	None
Methylenebis(phenylisocyanate)	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None
Polymeric diphenylmethane diisocyanate	None	None	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction.	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: Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. 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).

Eye/face protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing. Vapor resistant goggles should be worn when contact lenses are in use. 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:	Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). 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. Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Educate and train employees in safe use of product. Follow all label instructions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Fiberglass cloth coated with viscous white resin
Color:	White
Odor:	Odorless
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	0.003 mm hg (20 °C (68°F))
Boiling point/range:	648.9 °C (1,200°F)
Melting point/ range:	Not available.
Specific gravity:	1.22
Vapor density:	8.5
Flash point:	188 °C (370.4 °F) Pensky Martens 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 in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	Not available.
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous reactions:	Contact with moisture, other materials which can react with isocyanates, or temperatures above 204.4°C (400°F), may cause polymerization.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. Irritating organic vapours.
Incompatible materials:	Will cause some corrosion of copper alloys and aluminum. Water Amines. Strong bases. Alcohols.
Reactivity:	Not available.
Conditions to avoid:	Contamination with water. Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Toxicity data for monomeric and polymeric methylene bisphenyl isocyanate:, Inhalation LC50: Approximately 370-490 mg/ml for an aerosol of polymeric MDI (Rats 4 hours)., A two hour LC50 of greater than 400 mg/ml was determined on a dust of monomeric MDI (Rats)., Eye effects - slightly irritating. A maximum primary eye irritation score for a polymeric MDI of 12.0/110 (24 hours) was obtained. This score is fairly typical for a number of MDI products., Skin effects - Sight to moderate irritant. Primary dermal irritation scores are typically below 3.4/8.0 (Draize)., Sensitization - MDI has been shown to produce dermal sensitization in several species (guinea pigs, mice, rabbits, and dogs). Intradermal or topical application followed by inhalation challenge have resulted in a respiration sensitization response in guinea pigs. In addition, there is some evidence to suggest that cross-sensitization between different types of diisocyanates may occur., Chronic toxicity - In a chronic inhalation study, rats were exposed to an aerosol of polymeric MDI for six hours per day, five days per week for a period of two years. The exposure concentrations were 0, 0.2, 1.0 and 6.0 mg/m³. The No Observable Effects Level (NOEL) was 0.2 mg/m³., Carcinogenicity - In the same two year study described in "chronic toxicity" above, the occurrence of pulmonary adenomas (benign tumors) and a single pulmonary adenocarcinoma (malignant tumor) was considered to be related to exposure. These tumors were observed only in rats exposed to the high concentration of 6.0 mg/m³., Mutagenicity - Monomeric MDI is positive in the Ames assay (with hepatic microsomal activation). However, it was negative in an invivo-invitro micronucleous assay. MDI has been reported by NIOSH to be mutagenic to salmonella typhemurium bacteria in presence of a mammalian activating system. Recent work done by M. Anderson, at the Danish School of Pharmacy in Denmark and published in the Scandinavian Journal of Work and Environmental Health, also shows a positive result. There is not full agreement in the scientific community on the significance of these Ames test results and their relationship to human safety in the risk of cancer in man., Other toxicity data - No conclusive evidence has been developed to indicate that either MDI or a similar product (a solution of MDI and a polyisocyanate prepolymer based on MDI) is carcinogenic, teratogenic or that it causes reproductive effects in animals or in humans.

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

Potential Health Effects/Symptoms

Inhalation: Harmful if inhaled. Acute: Methylene bisphenyl isocyanate (MDI) vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with preexisting, nonspecific bronchial hyper-reactivity can respond to concentrations below the TLV with similar symptoms as well as lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitive pneumonitis with flu-like symptoms (e.g. fever, chills) have also been reported. These symptoms can be delayed up to several hours after exposure. Chronic: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. May cause allergic respiratory reaction. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Over exposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

Skin contact: Acute: Causes skin irritation. May cause allergic skin reaction. Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove. Chronic: Prolonged contact can cause reddening, swelling, rash, scaling, blistering and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapor. Once sensitized, an individual may react even to airborne levels below the TLV with the following symptoms: itching and tingling of the earlobes and neck, rash, hives, swelling of the arms and legs or other symptoms common to allergic dermatitis. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. These data reinforce the need to prevent direct skin contact with MDI.

Eye contact: Causes serious eye irritation. Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. These effects are usually reversible. See Section 4 for First Aid measures.

Ingestion: Harmful if swallowed. Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract if swallowed. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Glass, oxide, chemicals	None	Allergen, Respiratory
Polypropylene glycol 4,4-diphenylmethane diisocyanate prepolymer	None	No Records
Methylenebis(phenylisocyanate)	Inhalation LC50 (Rat, 4 h) = 0.38 mg/l	Irritant, Respiratory, Allergen
Polymeric diphenylmethane diisocyanate	None	Allergen, Irritant, Kidney, Liver, Respiratory
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Glass, oxide, chemicals	No	No	No
Polypropylene glycol 4,4-diphenylmethane diisocyanate prepolymer	No	No	No
Methylenebis(phenylisocyanate)	No	No	No
Polymeric diphenylmethane diisocyanate	No	No	No
Titanium dioxide	No	Group 2B	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: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

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

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: 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). Methylenebis(phenylisocyanate) (CAS# 101-68-8). Polymeric diphenylmethane diisocyanate (CAS# 9016-87-9).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL 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: Reviewed SDS. Reissued with new date.

Prepared by: Product Safety and Regulatory Affairs

Issue date: 10/25/2017

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.