Revision Number: 003.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOCTITE STYCAST PC 29M PTA known as HYSOL PC29M PART A GAL**

IDH number: 499668

Product type: Polyurethane resin

Item number: PA0006-B50

Restriction of Use: None identified

Region: United States

Company address:
Henkel Electronic Materials LLC
14000 Jamboree Road
Irvine, CA 92606

Contact information:
Telephone: +1 (888) 943-6535
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.henkel.com/electronics

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER**:**

FLAMMABLE LIQUID AND VAPOR.
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
MAY CAUSE DROWSINESS OR DIZZINESS.
SUSPECTED OF CAUSING CANCER.

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

PICTOGRAM(S)

Precautionary Statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection.

Response:	If on skin (or hair): Take off immediately all contaminated clothing. 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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. 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*
Polyurethane Prepolymer	Proprietary	60 - 100
Methoxypropyl acetate 2-	108-65-6	10 - 30
Xylenes	1330-20-7	10 - 30
Ethylbenzene	100-41-4	1 - 5
Toluene-2,4-diisocyanate	584-84-9	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. Get medical attention. Persons suffering from allergic reactions to isocyanates should avoid contact with the product. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing 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. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees. 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.Respiratory:This compound is a known pulmonary sensitizer.Ingestion:Treat symptomatically.There is no specific antidote.Inducing vomiting is contraindicated because of the irritating nature of this compound.

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. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	WARNING FLAMMABLE! Sealed containers at elevated temperatures or contaminated with water may rupture explosively. Vapors are heavier than air and may travel along the ground or be moved by ventilation and subsequently ignited by heat, pilot lights or other ignition sources at locations distant from the material handling point.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Isocyanates. Hydrogen cyanide. Toxic and irritating vapors.

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. Ensure adequate ventilation. Isolate area. Keep unnecessary personnel away. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. 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. Allow to stand uncovered for 48 hours to let carbon dioxide escape.

7. HANDLING AND STORAGE

Handling:	During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep away from heat, spark and flame. For operations where eye or face contact could occur, provide safety shower and eyewash fountain. Refer to Section 8.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Reacts slowly with water to liberate carbon dioxide gas. This gas can cause sealed containers to expand 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
Polyurethane Prepolymer	None	None	None	None
Methoxypropyl acetate 2-	None	None	50 ppm TWA	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m3) PEL	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m3) PEL	None	None
Toluene-2,4-diisocyanate	0.005 ppm TWA 0.02 ppm STEL (Sensitizer.)	0.02 ppm (0.14 mg/m3) Ceiling	None	None

Engineering controls: Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product. 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. 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: Under certain conditions such as heating or spraying where mists or aerosols may be generated and engineering controls are not sufficient suitable respiratory protection should be worn. A positive pressure, supplied-air respirator or a self-contained breathing apparatus is recommended. Use a NIOSH approved air-purifying respirator with an organic vapor cartridge. However, this should be permitted only for short periods of time (less than one hour) at relatively low concentrations (at or near the TLV). 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. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Light yellow
Odor: Solvent
Odor threshold: Not available.
pH: Not determined
Vapor pressure: Not determined
Boiling point/range: Not determined
Melting point/ range: Not determined
Specific gravity: 1.1
Vapor density: Not determined
Flash point: 40 °C (104°F) Closed cup
Flammable/Explosive limits - lower: Not determined
Flammable/Explosive limits - upper: Not determined

Autoignition temperature:	Not determined
Flammability:	Not applicable
Evaporation rate:	Not determined
Solubility in water:	Not miscible or difficult to mix Reacts with water.
Solubility in water:	Reacts slowly with water to liberate carbon dioxide gas.
Partition coefficient (n-octanol/water):	Not determined
VOC content:	43 % (calculated)
Viscosity:	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:	Oxides of carbon. Oxides of nitrogen. Isocyanates. Hydrogen cyanide. Toxic fumes. Thermal decomposition can lead to release of irritating gases and vapors.
Incompatible materials:	Water. Amines. Strong bases. Alcohols. Oxidizers. Copper.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Contamination with water. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion, Aerosols or vapors can be formed during heating, foaming, or spraying.

Potential Health Effects/Symptoms

Inhalation: High vapor concentrations may cause central nervous system depression (headache, nausea, dizziness). May cause allergic respiratory reaction. May cause respiratory tract irritation. 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). 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.

Skin contact: 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.

Eye contact: Causes serious eye irritation. Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. May cause corneal injury. Damage however is usually reversible.

Ingestion: Ingestion causes irritation and effects similar to inhalation. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Polyurethane Prepolymer	None	Allergen, Irritant
Methoxypropyl acetate 2-	None	Irritant, Central nervous system
Xylenes	Oral LD50 (Mouse) = 1,590 mg/kg Oral LD50 (Rat) = 6,670 mg/kg Oral LD50 (Rat) = 3,523 - 8,600 mg/kg Oral LD50 (Mouse) = 5,627 mg/kg Oral LD50 (Rat) = 4,300 mg/kg Dermal LD50 (Rabbit) = > 43 g/kg Inhalation LC50 (Rat, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
Ethylbenzene	Oral LD50 (Rat) = 5.46 g/kg Oral LD50 (Rat) = 3,500 mg/kg Dermal LD50 (Rabbit) = 17,800 mg/kg	Irritant, Central nervous system
Toluene-2,4-diisocyanate	Oral LD50 (Rat) = 5,800 mg/kg Inhalation LC50 (Rat, 4 h) = 14 mg/l Inhalation LC50 (Mouse, 4 h) = 10 mg/l	Allergen, Eyes, Irritant, Lung, Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyurethane Prepolymer	No	No	No
Methoxypropyl acetate 2-	No	No	No
Xylenes	No	No	No
Ethylbenzene	No	Group 2B	No
Toluene-2,4-diisocyanate	Reasonably Anticipated to be a Human Carcinogen.	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: D001: Ignitable.

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: Resin solution
Hazard class or division: 3
Identification number: UN 1866
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Resin solution
Hazard class or division: 3
Identification number: UN 1866
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: RESIN SOLUTION
Hazard class or division: 3
Identification number: UN 1866
Packing group: III

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: Toluene-2,4-diisocyanate (CAS# 584-84-9).

CERCLA/SARA Section 302 EHS: Toluene-2,4-diisocyanate (CAS# 584-84-9).

CERCLA/SARA Section 311/312: Fire, 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). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4). Toluene-2,4-diisocyanate (CAS# 584-84-9).

CERCLA Reportable quantity: Xylenes (CAS# 1330-20-7) 100 lbs. (45.4 kg)
Ethylbenzene (CAS# 100-41-4) 1,000 lbs. (454 kg)
Toluene-2,4-diisocyanate (CAS# 584-84-9) 100 lbs. (45.4 kg)

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: 2, 15

Prepared by: Debbie Friday, Regulatory Affairs Specialist

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