

# MarChem Polyurethane Systems

## Safety Data Sheet

### 1. Identification of Substance:

Product Name: H7327

**Supplier Identification:**

MarChem Polyurethane Systems

**Telephone:**

(714) 921-2300

**Address:**

212 W Taft Ave,  
Orange, CA 92865

**24-Hr. Emergency Phone Number:**

CHEMTREC (800) 424-9300

Product Use: Polyurethane isocyanate component

### 2. Hazards Identification:

**GHS Ratings:**

|                               |              |   |
|-------------------------------|--------------|---|
| Inhalation Toxicity           | Acute Tox. 4 | Gases>2500+<=5000ppm, Vapors>10+<=20mg/l, Dusts&mists>1+<=5mg/l   |
| Skin corrosive                | 2            | Reversible adverse effects in dermal tissue, Draize score: >= 2.3 < 4.0 or persistent inflammation  |
| Eye corrosive                 | 2A           | Eye irritant: Subcategory 2A, Reversible in 21 days   |
| Respiratory sensitizer        | 1            | Respiratory sensitizer  |
| Skin sensitizer               | 1            | Skin sensitizer   |
| Carcinogen                    | 2            | Limited evidence of human or animal carcinogenicity   |
| Organ toxin single exposure   | 3            | Transient target organ effects- Narcotic effects- Respiratory tract irritation  |
| Organ toxin repeated exposure | 1            | Significant toxicity in humans- Reliable, good quality human case studies or epidemiological studies Presumed significant toxicity in humans- Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure (guidanc |

**GHS Hazards**

|      |   |
|------|---|
| 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 |
| H336 | May cause drowsiness or dizziness   |
| H351 | Suspected of causing cancer   |
| H372 | Causes damage to organs through prolonged or repeated exposure            |

**GHS Precautions**

|      |  |
|------|--|
| P201 | Obtain special instructions before use                                   |
| P202 | Do not handle until all safety precautions have been read and understood |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray                          |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray                         |
| P264 | Wash hands thoroughly after handling                                     |
| 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/protective clothing/eye protection/face protection   |
| P281           | Use personal protective equipment as required   |
| P285           | In case of inadequate ventilation wear respiratory protection   |
| P312           | Call a POISON CENTER or doctor/physician if you feel unwell   |
| P314           | Get Medical advice/attention if you feel unwell   |
| P321           | Specific treatment is urgent (see Section 4 First Aid measures)   |
| P362           | Take off contaminated clothing and wash before reuse  |
| P363           | Wash contaminated clothing before reuse   |
| P302+P352      | IF ON SKIN: Wash with soap and water  |
| P304+P340      | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing                                   |
| P304+P341      | IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing        |
| P305+P351+P338 | IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing |
| P308+P313      | IF exposed or concerned: Get medical advice/attention   |
| P332+P313      | If skin irritation occurs: Get medical advice/attention   |
| P333+P313      | If skin irritation or a rash occurs: Get medical advice/attention   |
| P337+P313      | Get medical advice/attention  |
| P342+P311      | Call a POISON CENTER or doctor/physician  |
| P405           | Store locked up   |
| P403+P233      | Store in a well ventilated place. Keep container tightly closed   |
| P501           | Dispose of contents/container in accordance with Section 13   |

**Signal Word: Danger**



### **3. Composition/Data on Components:**

| <b>Chemical Name</b>                                  | <b>CAS number</b> | <b>Weight Concentration %</b> |
|---|-------------------|-------------------------------|
| Isocyanic acid, polymethylenepolyphenylene ester      | 9016-87-9         | 55.00%                        |
| 4,4'-Methylenediphenyl diisocyanate                   | 101-68-8          | 40.00%                        |
| Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- | 5873-54-1         | 5.00%                         |

### **4. First Aid Measures:**

**After Inhalation:** May cause severe irritation to upper respiratory tract and lungs, respiratory sensitization, decreased lung capacity.

Remove from exposure area to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention.

**After Eye Contact:** Rinse opened eye for at least 15 minutes under running water. Remove contact lenses if present and easy to do so, and continue rinsing.

**After Skin Contact:** Remove contaminated clothing. Clean affected area with soap and plenty of water. Call a physician if irritation or rash develops.

**After Swallowing:** Do not induce vomiting. If conscious, give 1 to 2 cups of milk or water to drink. Consult a physician at once.

**Notes to Physician:** Treat symptomatically. Following severe exposure the patient should be kept under medical observation for a least 48 hours.

## 5. Fire Fighting Measures:

Flash Point: 230 C (446 F)

LEL:

UEL:

**Suitable Extinguishing Agents:** Water spray, CO2, Foam, Dry chemical

**Information about Protection against Explosions and Fires:** Closed containers may rupture when exposed to extreme heat.

**Dangerous Products of Decomposition:** Oxides of carbon, oxides of nitrogen, and traces of HCN.

**Protective Equipment:** Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by firefighters.

## 6. Accidental Release Measures:

**Person-Related Safety Precautions:** Evacuate all non-essential personnel. Avoid contact with skin. Do not breathe aerosols or vapors.

**Measures for Environmental Protection:** Cover and contain spill with absorbent material. Place waste in open container. Remove to well ventilated area and dilute with ammonia solution (water 90%, concentrated ammonia 8%, detergent 2%). Collect for proper disposal according to local, state, and federal regulations.

## 7. Handling and Storage:

**Information for Safe Handling:** Do not breath fumes, vapors or mists. Use only with adequate ventilation. Avoid contact with skin or eyes. Immediately report spills or leaks.

**Storage Requirements:** Store in dry, well ventilated area. Keep containers tightly closed. Store between 60°F-100°F.

## 8. Exposure Controls and Personal Protection:

| Chemical Name / CAS No.  | OSHA Exposure Limits | ACGIH Exposure Limits | Other Exposure Limits |
|--|----------------------|-----------------------|-----------------------|
| Isocyanic acid,<br>polymethylenepolyphenylene ester<br>9016-87-9 | Not Established      | Not Established       | Not Established       |

|  |                                |   |  |
|--|--------------------------------|---|--|
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8                    | 0.005 ppm TWA<br>0.02 ppm STEL | 0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI)) | NIOSH: 0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.05 mg/m <sup>3</sup> TWA<br>0.020 ppm Ceiling (10 min); 0.2 mg/m <sup>3</sup> Ceiling (10 min) |
| Benzene, 1-isocyanato-2-[[4-isocyanatophenyl)methyl]-<br>5873-54-1 | Not Established                | Not Established   | Not Established  |

**Engineering Controls:** Use local exhaust ventilation to maintain airborne concentrations below the TLV, especially if heating or spraying. Use only in a well ventilated area to keep vapors below exposure limits. Use local exhaust ventilation if necessary.

**General Protective and Hygienic Measures:** Usual precautionary measures should be adhered to when handling chemicals.

**Personal Protective Equipment:**

**Respiratory Protection:** Do not inhale vapors. Use NIOSH approved respiratory protection if TLV/PEL is exceeded. Do not enter storage area unless adequately ventilated.

**Hand Protection:** Protective butyl rubber or nitrile rubber gloves.

**Eye Protection:** Chemical safety goggles.

**Body Protection:** Protective work clothing. Launder separately.

**9. Physical and Chemical Properties:**

|   |  |
|---|--|
| <p><b>Appearance:</b> Brown liquid</p> <p><b>Vapor Pressure:</b> N/A</p> <p><b>Vapor Density:</b> N/A</p> <p><b>Specific Gravity:</b> 1.234150838</p> <p><b>Freezing point:</b> N/A</p> <p><b>Boiling range:</b> N/A</p> <p><b>Evaporation rate:</b> N/A</p> <p><b>Explosive Limits:</b> N/A</p> <p><b>Autoignition temperature:</b> 240 °C</p> | <p><b>Odor:</b> Musty</p> <p><b>Odor threshold:</b> N/A</p> <p><b>pH:</b> N/A</p> <p><b>Melting point:</b> N/A</p> <p><b>Solubility:</b> N/A</p> <p><b>Flash point:</b> 446 F, 230 C</p> <p><b>Flammability:</b> N/A</p> <p><b>Partition coefficient (n-octanol/water):</b> N/A</p> <p><b>Decomposition temperature:</b> N/A</p> |
|---|--|

**10. Stability and Reactivity:**

**Chemical Stability:** Expected to be stable under normal storage conditions.

**Incompatible Materials:** Avoid contact with water, amines, strong bases, and alcohol.

**Hazardous Polymerization:** Not expected to occur.

**Dangerous Products of Decomposition:** Oxides of carbon, oxides of nitrogen, hydrocarbons, isocyanates, and traces of HCN.

**11. Toxicological Information:**

**Mixture Toxicity**

Inhalation Toxicity LC50: 1mg/L

**Component Toxicity**9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester  
Dermal LD50: 490 mg/m3 (Rat) Inhalation LC50: 490 mg/m3 (Rat)**Toxicity Values Listed if Known****Acute Health Effects:****Eyes:** Severe irritation, tearing, swelling, and possible damage to cornea.**Skin:** Irritation, redness, swelling, skin sensitization, rash, scaling, and blistering.**Inhalation:** Mucous membrane and respiratory tract irritation, tightness of chest, isocyanate sensitization.**Ingestion:** Irritating and corrosive to mouth, stomach, and digestive tract.**Chronic Health Effects:** Isocyanates may cause skin and respiratory sensitivity in some individuals. Sensitized individuals may react to very low levels diisocyanates below the PEL. Sensitized people who continue to work with diisocyanates may develop symptoms sooner after each exposure. Limited evidence of possible carcinogenic effects.**Conditions Aggravated by Exposure:** Asthma, respiratory disorders, skin allergies, eczema**Routes of Entry :** Inhalation, ingestion, skin contact, eye contact**Target Organs:** Respiratory track, eyes, skin**Chemicals with Known or Possible Carcinogenic Effects:**

| <u>CAS Number</u> | <u>Description</u> | <u>% Weight</u> | <u>Carcinogen Rating</u> |
|-------------------|--------------------|-----------------|--------------------------|
|-------------------|--------------------|-----------------|--------------------------|

**12. Ecological Information:****General Information:** Based on experience, no adverse effects are to be expected if correct disposal procedures have been followed as indicated in section 13. Individual component ecotoxicity listed if known.**Component Ecotoxicity**

|                                     |   |
|-------------------------------------|---|
| 4,4'-Methylenediphenyl diisocyanate | 24 Hr LC50 Brachydanio rerio: >500 mg/L |
|                                     | 24 Hr EC50 Daphnia magna: >500 mg/L     |

**13. Disposal Considerations:****Recommendation:** Observe local requirements. Dispose of in accordance with all applicable local/state/federal regulations.**14. Transport Information:****DOT Regulated Components:**4,4' Methylene Diphenyl Diisocyanate  
Reportable Quantity: 5000 lbs

When in individual containers of less than the substance RQ, this material ships as non-regulated. Containers above RQ ship as:

| <u>Agency</u> | <u>Proper Shipping Name</u>  | <u>UN Number</u> | <u>Packing Group</u> | <u>Hazard Class</u> |
|---------------|--|------------------|----------------------|---------------------|
| DOT           | Environmentally Hazardous Substance, N.O.S.<br>(Contains Diphenylmethane Diisocyanate) | 3082             | III                  | 9                   |

**15. Regulatory Information:****OSHA HAZARD COMMUNICATION STANDARD:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**SARA 311/312 Hazard Categories:** Acute health hazard, chronic health hazard.

**Massachusetts Right To Know List:**

4,4'-Methylenediphenyl diisocyanate 101-68-8 40.00 %

**New Jersey Right To Know List:**

Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9 55.00 %

**Pennsylvania Right To Know List:**

4,4'-Methylenediphenyl diisocyanate 101-68-8 40.00 %

**Chemicals subject to SARA 313 Reporting:**

4,4'-Methylenediphenyl diisocyanate 101-68-8 40.00 % Emissions

Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9 55.00 % Emissions

**All Substances Listed on TSCA Inventory Unless Noted:**

- None

**16. Other Information:**

Safety Data Sheet issued by Product Safety Department

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of MarChem Polyurethane Systems. The data on these sheets relates only to the specific material designated herein. MarChem Polyurethane Systems assumes no legal responsibility for use or reliance upon this data. It is the user's responsibility to ensure that their activities comply with federal, state, or local laws.

Date revised: 2015-05-19

Reviewer Revision

Date Prepared: 6/2/2015