

Acella Polyurethane Systems

Safety Data Sheet

1. Identification of Substance:

Product Name: RetroSeal 2.0 Isocyanate

Supplier Identification:

Acella Polyurethane Systems

Telephone:

770-607-0755

Address:

100 Enterprise Drive
Cartersville, GA 30120

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

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
H351	Suspected of causing cancer

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash hands thoroughly after handling
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
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
P501	Dispose of contents/container in accordance with Section 13

Signal Word: Danger



3. Composition/Data on Components:

Chemical Name	CAS number	Weight Concentration %
4,4'-Methylenediphenyl diisocyanate	101-68-8	40.00% - 50.00%
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	40.00% - 50.00%
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5873-54-1	5.00% - 10.00%

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 breathe 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
4,4'-Methylenediphenyl diisocyanate 101-68-8	0.005 ppm TWA 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/m3 TWA 0.020 ppm Ceiling (10 min); 0.2 mg/m3 Ceiling (10 min)
Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9	Not Established	Not Established	Not Established
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 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>Appearance: Amber liquid</p> <p>Vapor Pressure: N/A</p> <p>Vapor Density: N/A</p> <p>Specific Gravity: 0.00</p> <p>Freezing point: N/A</p> <p>Boiling range: N/A</p> <p>Evaporation rate: N/A</p> <p>Explosive Limits: N/A</p> <p>Autoignition temperature: 240°C</p>	<p>Odor: Musty</p> <p>Odor threshold: N/A</p> <p>pH: N/A</p> <p>Melting point: N/A</p> <p>Solubility: N/A</p> <p>Flash point: 446°F, 230°C</p> <p>Flammability: N/A</p> <p>Partition coefficient (n-octanol/water): N/A</p> <p>Decomposition temperature: N/A</p>
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10. Stability and Reactivity:

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

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: 2mg/L

Component Toxicity

101-68-8	4,4'-Methylenediphenyl diisocyanate
	Dermal LD50: 1 mg/L (Rat) Inhalation LC50: 369 mg/m3 (Rat)
9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester
	Dermal LD50: 490 mg/L (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>
101-68-8	4,4'-Methylenediphenyl diisocyanate	40 to 50%	4,4'-Methylenediphenyl diisocyanate:
5873-54-1	Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5 to 10%	Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-:

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. (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.

California Proposition 65

(Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute unless otherwise listed:

Massachusetts Right To Know List:

4,4'-Methylenediphenyl diisocyanate 101-68-8 40 to 50 %

New Jersey Right To Know List:

Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9 40 to 50 %

Pennsylvania Right To Know List:

4,4'-Methylenediphenyl diisocyanate 101-68-8 40 to 50 %

Chemicals subject to SARA 313 Reporting:

4,4'-Methylenediphenyl diisocyanate 101-68-8 40 to 50 % Emissions

Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9 40 to 50 % 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 Accella Polyurethane Systems. The data on these sheets relates only to the specific material designated herein. Accella 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.

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