

# SAFETY DATA SHEET

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

## TOP-TIER ADHESIVE Part A ISOCYANATE

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** TOP-TIER ADHESIVE Part A ISOCYANATE  
**RECOMMENDED USE:** Aromatic isocyanate for adhesives for industrial or professional use  
**PRODUCT DESCRIPTION:** Aromatic Polyurea Adhesive  
**PRODUCT CODE:** TOP-TIER ADHESIVE Part A ISOCYANATE  
**GENERIC NAME:** MDI Isocyanate

#### MANUFACTURER

PACELINE, INC.  
 10737 Independence Pointe Parkway  
 Matthews, NC 28105

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

**INFOTRAC (US Transportation):** (800) 535 - 5053  
**INFOTRAC (Outside USA):** (352) 323 - 3500

**Emergency Contact:** 9:00 AM - 5:00 PM Eastern Time  
**Emergency Phone:** (800) 443-1827  
**E-Mail/Website:** www.paceline.com

**COMMENTS: EMERGENCY TELEPHONE NUMBER:** In the event of an emergency involving spills, leaks, fire, exposure, or accident involving this product, contact INFOTRAC. Within the USA, Canada, or US Virgin Islands call INFOTRAC at 1-800-535-5053, 24 hours a day. Outside these areas call (352) 323-3500. Collect calls are accepted.

### 2. HAZARDS IDENTIFICATION

#### GHS CLASSIFICATIONS

Acute Toxicity (Inhalation), Category 4  
 Target Organ Toxicity (Single exposure), Category 3  
 Respiratory Sensitization, Category 1  
 Target Organ Toxicity (Repeated exposure), Category 1  
 Skin Irritation, Category 2  
 Skin Sensitization, Category 1  
 Eye Irritation, Category 2

#### GHS LABEL

According to Regulation 2012 OSHA Hazard Communications Standard: 29 CFR Part 1910.1200



Exclamation  
mark



Health  
hazard

**SIGNAL WORD:** DANGER

#### HAZARD STATEMENTS

H315: Causes skin irritation.  
 H317: May cause an allergic skin reaction.  
 H320: Causes eye irritation.  
 H332: Harmful if inhaled.  
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

# SAFETY DATA SHEET

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

## TOP-TIER ADHESIVE Part A ISOCYANATE

H335: May cause respiratory irritation.

H372: Causes damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

### PRECAUTIONARY STATEMENTS

#### Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapors/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.

P285: In case of inadequate ventilation wear respiratory protection.

#### Response:

P314: Get medical advice/attention if you feel unwell.

P302+P350: IF ON SKIN: Gently wash with plenty of soap and water.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342: If experiencing respiratory symptoms: Call a doctor or emergency medical facility (i.e. 911).

#### Storage:

P405: Store locked up.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

#### Disposal:

P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Clear straw color liquid.

**IMMEDIATE CONCERNS:** CAUTION: Contains DIPHENYLMETHANE DIISOCYANATE (CAS no. 101-68-8). Inhalation of MDI mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function.

Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing.

### POTENTIAL HEALTH EFFECTS

**EYES:** May cause significant irritation to the eyes.

**SKIN:** Allergic reaction and significant irritation to the skin is possible.

**INGESTION:** May cause significant irritation to the digestive tract.

**INHALATION:** Irritating to the nose, throat and respiratory tract.

**MEDICAL CONDITIONS AGGRAVATED:** Individuals who are sensitized to isocyanates and those with asthma, respiratory disorder, skin allergies, and eczema.

**SAFETY DATA SHEET**

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

**TOP-TIER ADHESIVE Part A ISOCYANATE****SENSITIZATION:** Possible sensitizer by inhalation and skin contact.**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt.%	CAS
Polyurethane Prepolymer	45 - 55	39420-98-9
Methylenediphenyl Diisocyanate	25 - 35	26447-40-5
Methylene Bisphenyl Isocyanate	15 - 25	101-68-8

**COMMENTS:** Criteria for listing components in this SDS are as follows: Carcinogens are listed at 0.1% or greater; hazardous components according to regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200 are listed at 1.0% or greater; non-hazardous components are not listed. This is not intended to be the complete compositional disclosure. If a "Trade Secret" "(TS)" is claimed in accordance to paragraph (i) of 1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES**

**EYES:** Immediately flush with plenty of water for two minutes. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Have eyes examined and tested by medical personnel.

**SKIN:** Remove contaminated clothing and immediately wash affected skin area with plenty of soap and water. Seek medical attention. Either discard or wash contaminated clothing and shoes before reuse.

**INGESTION:** Make sure victim is conscious and alert. If so, give 2-3 glasses of water to dilute. **DO NOT INDUCE VOMITING.** Never give anything by mouth to an unconscious person. Immediate medical attention is required. Do not leave victim unattended as spontaneous vomiting may occur. Lay victim on side with head lower than waist to prevent aspiration of swallowed product. If victim is conscious and vomiting occurs, give water to further dilute the chemical.

**INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Seek medical attention if cough or other symptoms develop.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**ACUTE TOXICITY:** Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed. Gastrointestinal symptoms include nausea, vomiting and abdominal pain.

**CHRONIC EFFECTS:** Results from a lifetime study in rats indicate that MDI aerosol was carcinogenic at 6 mg/m<sup>3</sup>, the highest dose tested. This is well above the recommended TLV of 5 ppb (0.05 mg/m<sup>3</sup>). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m<sup>3</sup>. No birth defects or teratogenic effects were reported in a teratology study with rats exposed to 1, 4, and 12 mg/m<sup>3</sup> polymeric MDI or 6 hr/day on days 6-15 of gestation. Embryotoxicity and fetotoxicity was reported at the top dose in the presence of maternal toxicity.

As a result of the previous repeated overexposures or single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. This increased lung sensitivity can persist for weeks and in severe cases for several years.

**5. FIRE FIGHTING MEASURES**

# SAFETY DATA SHEET

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

## TOP-TIER ADHESIVE Part A ISOCYANATE

**FLAMMABLE CLASS:** Not Applicable

**EXTINGUISHING MEDIA:** Dry Chemical, Foam, or Carbon Dioxide. Water is not recommended due to reaction.

**FIRE FIGHTING PROCEDURES:** Do not release runoff from fire control methods to sewers or waterways.

**FIRE FIGHTING EQUIPMENT:** Firefighting personnel are required to use respiratory and eye protection. Full fire protective equipment (Bunker Gear) and self-contained breathing apparatus (SCBA) is recommended to be used for all indoor fires and any significant outdoor fires. SCBA may not be required for small outdoor fires that may easily be extinguished with a portable fire extinguisher.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of Nitrogen, Oxides of Carbon.

### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as diatomaceous earth, sawdust, vermiculite, or any appropriate readily available material and sweep or shovel absorbed material into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed thoroughly wash the contaminated area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal.

Wear the appropriate personal protective equipment designated in Section 8, remove the leaking container to a containment area and place into an appropriate container to prevent any further spill.

**LARGE SPILL:** Construct temporary dikes of dirt or sand to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as diatomaceous earth, sawdust, vermiculite, or any appropriate readily available material and sweep or shovel adsorbed material into closed containers for disposal. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal.

Wear the appropriate personal protective equipment designated in Section 8, close or cap leaking valves and/or block or plug hole in leaking container. Remove the leaking containers to a containment area and place into an appropriate container to prevent any further spill.

Contain material as described above and call the local fire, police, or appropriate emergency response provider for immediate emergency assistance.

### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of material into sources of water.

**GENERAL PROCEDURES:** Absorb spill with an emergency spill kit, diatomaceous earth, saw dust or equivalent inert material. Shovel up and dispose of at an appropriate waste disposal facility following applicable laws and regulations.

### 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Store product in original containers. Store container in a secure cool, dry, well ventilated area at 55-85 deg. F. Opened containers should be blanketed with nitrogen gas at atmospheric pressure to avoid reaction with moisture. Contamination with moisture or "basic" compounds can cause dangerous pressure buildup in closed containers.

**HANDLING :** Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure. Avoid breathing in vapors, mists, and aerosols. Do not allow product to contact open flame or electrical heating elements because dangerous decomposition products may form.

**SAFETY DATA SHEET**

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

**TOP-TIER ADHESIVE Part A ISOCYANATE**

**STORAGE:** Store and warehouse product in an appropriate area or facility. Segregate like materials together to avoid negative chemical reactions. Protect materials from excessive exposure to heat. Observe proper storage conditions and temperatures.

**STORAGE TEMPERATURE:** (55°F) Minimum to (85°F) Maximum

**COMMENTS:** If bulging of containers occurs, transfer to a well ventilated area and open carefully to relieve pressure then reseal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Methylene Bisphenyl Isocyanate	TWA	.02	.2	.005		[1]	[1]
	STEL	.02				[1]	[1]
<b>OSHA TABLE COMMENTS:</b>							
1. Not Established							

**ENGINEERING CONTROLS:** Proper industrial hygiene practices are required for workers and should be achieved through engineering controls including ventilation with a high turnover rate whenever feasible. When such controls are not available or not feasible to achieve full protection, respirators for workers (and others in the area) and other personal protective equipment is mandated. Exhaust air may need to be scrubbed (cleaned) or filtered to reduce environmental contamination and odors.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** Wear safety goggles or safety glasses with side shields when handling and mixing this material.

**SKIN:** Wear impervious compatible chemical resistant protective clothing such as neoprene or butyl rubber gloves, aprons, boots or Tyvek coveralls, as appropriate to prevent contact with skin.

**RESPIRATORY:** For respirator selection and training, seek professional advice. Whenever workplace conditions require a use of a respirator, follow a respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements. Wear an OSHA/NIOSH approved respirator selected on its suitability to provide adequate worker protection for the chemicals used and given working conditions including the level of airborne contamination and presence of sufficient oxygen.

**WORK HYGIENIC PRACTICES:** Always follow "Good personal hygiene practices" when working with this material.

**COMMENTS:** Always practice "good personal hygiene" during and after use of this materials, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. DO NOT eat, drink, or smoke in work areas that contain hazardous chemicals.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid

**ODOR:** Faint aromatic odor.

**ODOR THRESHOLD:** No data available

**COLOR:** Clear to pale yellow

**pH:** No data available

**FLASHPOINT AND METHOD:** > 93.34°C (200.01°F) Pensky-Martens CC

**SAFETY DATA SHEET**

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

**TOP-TIER ADHESIVE Part A ISOCYANATE****FLAMMABLE LIMITS:** No data available**VAPOR PRESSURE:** < 0.001 mmHg at 25°C**VAPOR DENSITY:** No data available**BOILING POINT:** 208°C (406.4°F)**FREEZING POINT:** < 0°C (32°F)**SOLUBILITY IN WATER:** Insoluble in water, reacts with evolution of CO<sub>2</sub>**EVAPORATION RATE:** No data available**SPECIFIC GRAVITY:** 1.12 g/cm<sup>3</sup> at 25°C (77°F)**VISCOSITY:** No data available**(VOC):** to 0 g/l

**Notes:** VOC listed on the SDS is for this component only. Mixed VOC for the combined product may have a different value. Consult the manufacturer or product data sheet for final mixed product VOC value.

**PARTITIONING COEFF n-octanol/water (log Pow):** No data available**10. STABILITY AND REACTIVITY****REACTIVITY:** Yes**HAZARDOUS POLYMERIZATION:** May occur if material is in contact with moisture.**STABILITY:** This material (product) is stable under normal ambient conditions of temperature and pressure. Follow recommendations for proper storage and use.**CONDITIONS TO AVOID:** Avoid high temperatures, sources of ignition, and moisture.**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal oxidative decomposition of this product can produce CO, NO<sub>x</sub>, HCN, and HDI vapors. Some curing agents will react to produce a large amount of heat.**INCOMPATIBLE MATERIALS:** Water, strong bases, strong acids, strong oxidizing agents, alcohols, and amines.**11. TOXICOLOGICAL INFORMATION****ACUTE****DERMAL LD<sub>50</sub>:** > 9400 mg/kg (rabbit)**ORAL LD<sub>50</sub>:** > 2000 mg/kg (rat)**INHALATION LC<sub>50</sub>:** .49 mg/l, 490, (4 HR rat)**EYE EFFECTS:** Slightly Irritating**SKIN EFFECTS:** Slightly Irritating**CARCINOGENICITY****IARC:** Not Listed by IARC.**NTP:** Not listed by NTP.**OSHA:** Not listed by OSHA.**MUTAGENICITY:** Product is a blend of material that has been shown to be Ames Negative (non-mutagenic)**GENERAL COMMENTS:** This product does not contain substances considered by OSHA, NTP, IARC or ACGIH to be "probable"

**SAFETY DATA SHEET**

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

**TOP-TIER ADHESIVE Part A ISOCYANATE**

or "suspected" human carcinogens.

**COMMENTS:** The chemical, physical, and toxicological properties have not been thoroughly investigated or tested to the best of our knowledge.

**12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL DATA:** No environmental data has been established or is available for this product.

**GENERAL COMMENTS:** Avoid contaminating waterways.

**13. DISPOSAL CONSIDERATIONS**

**DISPOSAL METHOD:** See the manufacturers instructions to mix together with the proper components of multi-component materials, and allow to harden. Dispose solids at an appropriate waste disposal facility according to current applicable laws and regulations.

**COMMENTS:** Refer to Section 6. Accidental Release Measures for additional information.

**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Other regulated substances, liquid, n.o.s. (contains 4,4'-Diphenylmethane Diisocyanate (MDI))

**PRIMARY HAZARD CLASS/DIVISION:** 9

**UN/NA NUMBER:** 3082

**PACKING GROUP:** III

**REPORTABLE QUANTITY (RQ) UNDER CERCLA:** 10549 kg

**OTHER SHIPPING INFORMATION:** When in individual containers of less than the Product RQ, this material ships as non-regulated.

**AIR (ICAO/IATA)**

**SHIPPING NAME:** Not Regulated

**VESSEL (IMO/IMDG)**

**SHIPPING NAME:** Not Regulated

**CANADA TRANSPORT OF DANGEROUS GOODS**

**SHIPPING NAME:** Not Regulated

**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**FIRE:** No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

**313 REPORTABLE INGREDIENTS:** 101-68-8 Diisocyanates

**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)**

**CERCLA REGULATORY:** 101-68-8 Diisocyanates

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**



**SAFETY DATA SHEET**

Industrial / Professional Use Only



Date Prepared : 12/14/2023

Revision No : 0

**TOP-TIER ADHESIVE Part A ISOCYANATE**

**TSCA STATUS:** All ingredients in this mixture are listed with the TSCA Chemical Substance Inventory.

**REGULATIONS**

**STATE REGULATIONS:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

Methylene bis(phenylisocyanate) (MDI) CAS# 101-68-8

New Jersey Environmental Hazardous Substances, New Jersey Workplace Hazardous Substances

Pennsylvania Environmental Hazardous Substances, Pennsylvania Hazardous Substances

**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Poison

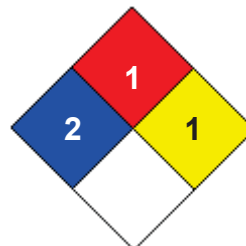
**DOMESTIC SUBSTANCE LIST (INVENTORY):** This product or its components are listed or exempt from the Canadian Domestic Substance List (DSL). Components not listed have been submitted to Environment Canada.

**16. OTHER INFORMATION**

**PREPARED BY:** PACELINE, INC.      **Date :** 12/14/23

**HMIS RATING**

<b>HEALTH</b>	<b>2</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>1</b>
<b>PERSONAL PROTECTION</b>	<b>G</b>

**NFPA CODES**

**MANUFACTURER DISCLAIMER:** This SDS to the best of our knowledge conforms to the requirements of 2012 OSHA Hazard Communication Standard 29 CFR 1910.1200, and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Responsibility for the product sold is subject to our standard



# SAFETY DATA SHEET

Industrial / Professional Use Only



**PACELINE**  
ADVANCED MEDICAL SOLUTIONS

Date Prepared : 12/14/2023

Revision No : 0

## TOP-TIER ADHESIVE Part A ISOCYANATE

---

terms and conditions, a copy of which is available upon request. This company warrants only that its products meet the specifications stated in the sales contract. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, NO GUARANTY, WARRANTY, OR REPRESENTATION IS MADE, INTENDED, OR IMPLIED AS TO THE CORRECTNESS, OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE MERCHANTABILITY OR SUITABILITY OR FITNESS OF ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS FOR ANY PARTICULAR USE OR PURPOSE, OR THAT ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS OR THE USE THEREOF ARE NOT SUBJECT TO A CLAIM BY A THIRD PARTY FOR INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. Liability by this company for all claims, whether arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. For all products listed, the user should obtain detailed information on toxicity, together with the proper shipping, handling and storage procedures, and comply with all applicable safety and environmental standards. Toxicity and risk characteristics of chemical compounds and other products may differ when used with other materials or in a manufacturing or other process. Those risk characteristics should be determined by the user and made known to handlers, processors, and end users.