

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PC® 88 adhesive Component II

Manufacturer/Supplier:

Pittsburgh Corning Corporation

800 Presque Isle Drive

Pittsburgh, PA 15239

Information Number: 724-327-6100

CHEMTREC: 800/424-9300

Generic Name: Aromatic isocyanate mixture**NFPA HAZARD CLASS:** Health: 3 Fire: 1 Reactivity: 1**Use:** Part II of a two part adhesive used to bond FOAMGLAS® insulation to itself or to other porous or nonporous substrates.**General Comments:**

General information and emergency information available 8:00 AM – 5:00 PM ET Monday through Friday.

CHEMTREC telephone number is to be used only in the event of chemical transportation emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to technical service.

NA = Not Applicable or Not Available

NE = not established

UN = unavailable

SECTION 2 – HAZARDOUS INGREDIENTS

EXPOSURE LIMITS

Ingredient	CAS number	% by weight	ACGIH TLV	OSHA PEL
4,4'-Diphenylmethane diisocyanate	101-68-8	35-45	0.02 ppm	0.02 ppm
Polymeric Diphenyl Diisocyanate	9016-87-9	20-30	NE	NE
Polyisocyanate based on MDI	Proprietary	20-30	NE	NE
Diphenylmethane Diisocyanate (MDI)	26447-40-5	5-15	NE	NE
Phenyl isocyanate	103-71-9	<5	NE	NE

SECTION 3 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark brown liquid	Color:	Brown
Odor:	Slightly musty odor	Odor threshold:	NE
Boiling Point °F (°C):	>406°F (>208°C)	Specific Gravity (H₂O = 1):	1.23
Vapor Pressure (MM Hg):	< 5-10 mm Hg	Percent Volatile By Weight (%):	Negligible
Vapor Density (Air = 1)	8.5	pH:	NE
Solubility in Water:	Insoluble, Reacts	Freezing/melting range:	NE
		Evaporation Rate (BuAc = 1)	Nil

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SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point: 350°F PMCC

Flammable Limits: Upper Explosive Limit/Lower Explosive Limit: UN/UN

Autoignition Temperature: UN

Flammability Classification: OSHA: Not regulated **DOT:** Not regulated

Appropriate Extinguishers: dry chemical, water fog, carbon dioxide, or foam.

Special Fire Fighting Procedures: Wear positive-pressure self contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat pants, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with SCBA. If this will not provide sufficient fire protection, consider fighting the fire from a remote location. For protective equipment in post-fire or non-fire clean up situations, refer to the relevant sections. Isolate fire area and deny unnecessary entry. Keep people away from material and fire. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Do not use a direct water stream, which may spread the fire. Use water spray to cool fire exposed containers and fire affected zone until the fire is out. Fight fire from a protected location or a safe distance. Consider the use of unmanned hose holder or monitor. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container. Move the container from the fire area if this is possible without hazard.

Unusual Fire and Explosion Hazards: During a fire, smoke may contain the original material in addition to the unidentified toxic and/or irritating compounds. Hazardous combustion products may include but are not limited to: Nitrogen oxides, Isocyanate, hydrogen cyanide, carbon monoxide, and carbon dioxide. Dense smoke is produced when products burns. At temperatures greater than 400°F (204°C), isocyanate can polymerize and decompose, which can cause pressure build up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fore exposed containers. Violent steam generation or eruption may occur upon application of direct water to hot liquids. Spill of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperatures, possibly resulting in spontaneous combustion. Product reacts with water. Reaction may produce heat and or gases. Container may rupture from gas generation in a fire situation. This reaction may be violent. Water fog, fine water spray, carbon dioxide, dry chemical, or ATC type foams may be used to extinguish the fire. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream. This may spread fire.

SECTION 5 – HEALTH HAZARD INFORMATION

Symptoms/Effects of Overexposure:

Eyes: Can cause irritation, tearing, reddening, and swelling. May cause slight transient corneal injury.

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Skin: Isocyanates react with skin protein and moisture and can cause irritation, which may include the following symptoms: Redness, swelling, rash, scaling, or blistering. Prolonged or repeated exposure may cause skin to stain. Skin contact may result in skin or respiratory sensitization, but is not expected to result in absorption of amounts sufficient to cause other adverse effects.

Inhalation: Isocyanate vapors or mist at concentrations above the TLV can irritate the mucus membranes in the respiratory tract, causing runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Asthma type symptoms may develop and may be immediate or delayed up to several hours.

Ingestion: Can cause irritation and corrosive action to the mouth and gastrointestinal tract. May be harmful or fatal if swallowed.

Aggravated Medical Conditions: MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Overexposure may have liver and/or adrenal affects.

Chronic Health Effects: Repeated overexposure can lead to isocyanate sensitization (Chemical Asthma), which will cause the individual to react to a later exposure at levels well below the TLV for isocyanate. Chronic overexposure may lead to permanent lung damage. Animals exposed to MDI/Polymeric MDI at a level of 6 mg/M³ for the duration of their lifetime have developed lung cancer.

SECTION 6 – FIRST AID MEASURES

Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention immediately.

NOTE TO THE PHYSICIAN: May cause respiratory sensitization or asthmatic symptoms. Bronchodilators, expectorants, and antitussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed for 24 – 48 hours for signs of respiratory distress. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

Eyes: Flush eyes with large amounts of running water immediately for 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

Skin: Remove contaminated clothing and launder thoroughly before reuse. Wash material from skin thoroughly with soap and water. For severe exposure, use safety shower after removing clothing. Seek medical attention. If irritation, rash or other symptoms develop, contact medical assistance immediately.

Ingestion: DO NOT INDUCE VOMITING unless otherwise directed by medical personnel. Give 1-2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Get immediate medical attention.

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SECTION 7 – STABILITY AND REACTIVITY DATA

Stability: Material is normally chemically stable when stored in a cool, dry place. Store at temperatures between 75°F (24°C) and 105°F (41°C). Product can decompose at elevated temperatures, and may self react at temperatures above 320°F (160°C)

Incompatibility: Avoid contact with moisture, aluminum, brass, copper, galvanized metals, zinc, acids, alcohols, amines, ammonia, bases, metal components, humid air, and strong oxidizers. Avoid unintended contact with polyols.

Hazardous Decomposition: Reaction with water will produce carbon dioxide, and heat. This may lead to pressure buildup in closed containers. Hazardous decomposition products depend upon temperature, air supply, and the presence of other materials.

Hazardous Polymerization: Product may self react at temperatures above 320°F (160°C)

SECTION 8 – ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Evacuate and barricade area. Ventilate area of leak or spill. Contain spill to prevent contamination of soil, surface water or ground water; wear full protective equipment; including respirator 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 the spill. Keep upwind of spill. Large quantities may be pumped into closed, but not sealed, containers for disposal. Minor spills may be cleaned up by absorbing with material such as: sawdust, vermiculite, dirt, sand, clay, cob grit, Milisorb®. Avoid materials such as cement powder. Collect material in suitable unsealed containers such as poly-lined fiber packs or plastic drums and properly label the open containers. Do not place in sealed container. Prolonged contact with water results in a chemical reaction, which may result in rupture of the container. Transfer to a well-ventilated area and attempt to neutralize by adding materials such as: mixture of 5% ammonia or 5% sodium (bi) carbonate solution; with 2% detergent and water. If ammonia is used, use good ventilation to prevent vapor exposure. Allow to stand uncovered for forty-eight (48) hours to let carbon dioxide escape.

SECTION 9 – DISPOSAL CONSIDERATIONS

Disposal Method: Dispose of material in accordance with federal, state and local regulations. DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION 10 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical type goggles and/or face shield should be worn. Vapor resistant goggles should be worn when contact lenses are in use.

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Clothing/Gloves: Permeation resistant gloves (butyl rubber, nitrile rubber, and polyvinyl alcohol). However, please note the PVA 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.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved positive-pressure supplied air respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Exposure guideline(s): Methylene bisphenyl isocyanate: ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm Ceiling. PELs are in accord with those recommended by OSHA as in the 1989 revision of PELs.

Ventilation: 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 the guidance about adequate ventilation.

SECTION 11 – HANDLING AND STORAGE

Special Sensitivity If container is exposed to high heat (400°F, 204°C), it can be pressurized and possibly rupture. Isocyanate reacts slowly with water to form carbon dioxide. This gas can cause sealed containers to expand and possibly rupture.

Handling/Storing Precautions: Store in a tightly closed container to prevent moisture contamination. in a cool, dry place. Store at temperatures between 75°F (24°C) and 105°F (41°C). Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors.

SECTION 12– REGULATORY INFORMATION

Toxic Substances Control Act (TSCA): On the TSCA Inventory

SARA Title III:

Section 313 Emergency Planning and Community Right-to-Know Act of 1986, 40

CFR 372: This product contains the following toxic chemicals subject to the reporting requirements of section 313:

<u>CAS#</u>	<u>Chemical Name</u>	<u>% by Weight</u>
101-68-8	4,4'-Diphenylmethane diisocyanate	35-45
9016-87-9	Polymeric diphenylmethane diisocyanate	20-30

