

Safety Data Sheet

Revision Date 01.11.2016

Revision: 2

1 Identification of the substance/mixture and the company/undertaking

1.1 Product identifier

Trade name: Polyurea Hardener

Article number: Edge-Pro 80 Part B

1.2 Application of the substance / the mixture: Polyurea joint filler

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:

Metzger/McGuire Co.

P. O. Box 2217

Concord, NH 03302

Telephone: (800) 223-6680

1.4 Emergency telephone number:

ChemTel Inc.

(800) 255-3924, +1 (813) 248-0585

2 Hazards identification

2.1 GHS Classification of the substance or mixture

Acute Tox.	4 (Inhalation - mist)	Acute toxicity
Eye Dam./Irritant	2B	Serious eye damage/eye irritation
Skin Corr./Irritant	2	Skin corrosion/irritation
Skin Sens.	1B	Skin sensitization
Resp. Sens.	1	Respiratory sensitization
STOT SE	3 (irritating)	Specific target organ toxicity — single exposure respiratory system
STOT SE	2 (by inhalation)	Specific target organ toxicity — repeated exposure

2.2 GHS Label elements

Hazard pictograms/symbols



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.

H335 May cause respiratory irritation.

H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P271 Use only outdoors or in a well-ventilated area.

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P260 Do not breathe dust/gas/mist/vapours.
P261 Avoid breathing mist.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to hazardous or special waste collection point.

Additional information:

No specific dangers known, if the regulations/notes for storage and handling are considered.

HMIS Rating:

Health: 2
Flammability: 1
Physical Hazard: 1

3 Composition/information on ingredients

3.2 Mixture

Description: Mixture of substances listed below with potential nonhazardous additions.

Dangerous components:		
CAS: 101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	15-80%
CAS: 26447-40-5	Methylenediphenyl diisocyanate	<5%

4 First aid measures

4.1 Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

4.2 Most important symptoms and effects, both acute and delayed:

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Hazards: Symptoms can appear later.

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Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

4.3 Indication of any immediate medical attention and special treatment needed:

Note to physician Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

water spray, dry powder, carbon dioxide, foam

5.2 Specific hazards arising from the substance or mixture:

Hazards during fire-fighting:

nitrous gases, fumes/smoke, isocyanate, vapour

5.3 Advice for the firefighters

Protective equipment:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Additional information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment

6.2 Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up:

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

7 Handling and storage

7.1 Precautions for safe handling:

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

7.2 Conditions for safe storage, including any incompatibilities:

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.

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Further Information about storage conditions:

Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

8 Exposure controls/personal protection

8.1 Control parameters

Exposure Limits (Components):

Diphenylmethane-4,4'-diisocyanate (MDI)	OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³ ; CLV 0.02 ppm 0.2 mg/m ³ ;
	ACGIH TLV	TWA value 0.005 ppm ;

8.2 Engineering controls

Provide readily accessible eye wash stations and safety showers.
Provide ventilation adequate to ensure concentrations are minimized.

8.3 Personal protective equipment

General protective and hygienic measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Skin and Body protection:

Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include, saran-coated material, depending upon conditions of use.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance

Form:	Liquid
Colour:	Clear
Odour:	Faint aromatic
Odour threshold:	No data available
pH:	No data available
Melting point/range:	< 0 °C
Boiling point/range:	> 200 °C
Flash point:	> 200 °C
Evaporation rate:	No data available
Flammability (solid, gaseous):	Not applicable

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Upper/lower flammability or explosive limit:	Not applicable
Vapor pressure:	No data available
Vapor density:	No data available
Relative Density at 20°C:	1.09 g/cm ³
Solubility in / Miscibility with Water:	Reacts with water
Partition coefficient (n-octanol/water):	No data available
Auto/Self-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity	2,000 – 3,000 cps

10 Stability and reactivity

10.1 Reactivity

Corrosion to metals: No corrosive effect on metal.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions:

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

10.4 Conditions to avoid:

Avoid moisture.

10.5 Incompatible materials:

Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates.

10.6 Hazardous decomposition products:

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapours

11 Toxicological information

11.1 Information on likely routes of exposure:

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

11.2 Symptoms related to physical, chemical and toxicological characteristics:

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms.

Medical conditions aggravated by overexposure

The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV₁, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:

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Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

11.4 Numerical measures of toxicity:

Oral

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (Directive 84/449/EEC, B.1)

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: 2.0 mg/l (OECD Guideline 403) An aerosol was tested.

Dermal

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Type of value: LD50

Species: rabbit (male/female)

Value: > 9,400 mg/kg

12 Ecological information

12.1 Aquatic toxicity:

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. The product may hydrolyse. The test result may be partially due to degradation products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish

LC0 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Aquatic invertebrates

EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants

EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

12.2 Persistence and degradability: Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

12.3 Bioaccumulative potential: No data available on the product itself.

12.4 Mobility in soil: No data available.

12.5 Other adverse effects: No further relevant information available

13 Disposal considerations

13.1 Waste treatment methods

Waste from residue/unused product:

This product should not be allowed to enter drains, water courses or the soil. Dispose of this material in a safe manner and in accordance with federal, state and local regulations

Contaminated packaging:

Disposal must be made in accordance with official federal, state and local regulations.

14 Transport information

DOT

Not classified as a dangerous good under transport regulations

IATA

Not classified as a dangerous good under transport regulations

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IMDG

Not classified as a dangerous good under transport regulations

15 Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

EPCRA 313: CAS Number
101-68-8

Chemical name
Diphenylmethane-4,4'-diisocyanate (MDI)

CERCLA RQ

5000 LBS

CAS Number

101-68-8

Chemical name

Diphenylmethane-4,4'-
diisocyanate (MDI)

State regulations

State RTK

NJ

MA, NJ, PA

CAS Number

26447-40-5

101-68-8

Chemical name

Methylenediphenyl diisocyanate

Diphenylmethane-4,4'-
diisocyanate (MDI)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviation and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienist.

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substance

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)