

**1 Identification of the substance/mixture and the company/undertaking**
**1.1 Product identifier**

 Trade name: Edge – Pro 90 Part A
**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

Mailing Address:

PO Box 2217

Concord, NH 03302

Shipping Address:

8 Integra Dr.

Concord, NH 03301

Phone: 603-224-6122

Toll Free: 800-223-6680

Email: info@metzgermcguire.com

**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 toxicity (Oral): Category 4  
 Eye Damage/Irritant Category 2A  
 Skin sensitization: Category 1  
 Acute aquatic toxicity: Category 1  
 Chronic aquatic toxicity: Category 1

**2.2 GHS Label elements**
**Hazard pictograms/symbols**

**Signal word:** Warning

**Hazard statements:**

H302: Harmful if swallowed.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statements:**

P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264: Wash skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves.

P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage.

**Additional information:** May produce an allergic reaction. Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

**HMIS Rating:**

Health: 2

Flammability: 1

Physical Hazard: 0

**3 Composition/information on ingredients**
**3.2 Mixture**
**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 68479-98-1	Diethylmethylbenzenediamine	<5%
CAS: 5285-60-9	N,N'-dialkylaminodiphenylmethane	<5%

**4 First aid measures**
**4.1 First Aid Measures**
**If inhaled:** If breathed in, move person into fresh air. Oxygen or artificial respiration if needed. In case of bluish discoloration (lips, ear lobes, fingernails), give oxygen as quickly as possible. Obtain medical attention.

**In case of skin contact:** Take off contaminated clothing and shoes immediately. Wash off with warm water and soap.

If skin irritation occurs, seek medical advice/attention. Wash contaminated clothing before re-use. Destroy contaminated shoes.

**In case of eye contact:** Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

**If swallowed:** Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Obtain medical attention. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed:** Sensitizing effects

**Notes to physician:** The first aid procedure should be established in consultation with the doctor responsible for industrial medicine

**5 Firefighting measures**
**5.1 Extinguishing media**
**Suitable extinguishing agents:** Water haze or fog, Foam, Fire-extinguishing powder, Carbon dioxide.

**For safety reasons unsuitable extinguishing agents:** Water with full jet, Water spray

**5.2 Special hazards arising from the substance or mixture:** No information available.

**5.3 Advice for the firefighters**
**Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Additional information:** Cool endangered receptacles with water fog or haze. Eliminate all ignition sources if safe to do so.

**6 Accidental release measures**
**6.1 Personal precautions, protective equipment and emergency procedures:** Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources.

**6.2 Environmental precautions:** Toxic to aquatic life. Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Prevent from spreading (e.g. by damming-in or oil barriers).

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with liquid-binding material.

Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**7 Handling and storage**
**7.1 Precautions for safe handling:** Handle in accordance with good industrial hygiene and safety practice.

Handle and open container with care. Protect from moisture. To avoid thermal decomposition, do not overheat.

Use only in area provided with appropriate exhaust ventilation. Avoid inhalation, ingestion and contact with skin and eyes.

Wear suitable protective clothing, gloves and eye/face protection. Wash thoroughly after handling. Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

**7.2 Conditions for safe storage, including any incompatibilities:** Keep containers tightly closed in a dry, cool and well ventilated place. Keep under nitrogen. Keep away from heat and flame.

**Further Information about storage conditions:** Keep container tightly sealed. Store in an area with adequate ventilation.

## 8 Exposure controls/personal protection

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**8.2 Engineering controls** Use mechanical ventilation for general area control. Ensure that extracted air cannot be returned to the workplace through the ventilation system. Ensure that eyewash stations and safety showers are close to the workstation location.

### 8.3 Personal protective equipment

**General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

**Respiratory protection:** Not required under normal conditions of use. Use respirator when performing operations involving potential exposure to vapour of the product.

**Hand protection:** Protective, impervious gloves. (Neoprene, PVC, Nitrile rubber) The glove material has to be impermeable and resistant to the product / the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Eye protection:** Safety glasses with side shields. Contact lenses should not be worn.

**Skin and Body protection:** Protective work clothing. Where potential exposure warrants, rubber or plastic boots and chemically resistant protective suit.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance

Form:	Liquid
Colour:	Gray
Odour:	amine-like
Odour threshold:	No data available
pH:	No data available
Melting point/range:	No data available
Boiling point/range:	>392 °F / >200 °C
Flash point:	>302 °F / >150 °C
Evaporation rate:	No data available
Flammability (solid, gaseous):	Not applicable
Upper/lower flammability or explosive limit:	Not applicable
Vapor pressure:	No data available
Vapor density:	No data available
Relative Density at 20°C:	1.03 g/cm <sup>3</sup>
Solubility in / Miscibility with water:	Slightly soluble
Partition coefficient (n-octanol/water):	No data available
Auto/Self-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity	3,000 – 6,000 cps

## 10 Stability and reactivity

**10.1 Reactivity:** No dangerous reaction known under conditions of normal use.

### 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:** Hazardous polymerization does not occur.

**10.4 Conditions to avoid:** Exposure to moisture. Heat.

**10.5 Incompatible materials:** Strong acids, bases and oxidizing agents.

**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide. Nitrogen oxides (NOx) Sulphur oxides.

## 11 Toxicological information

### 11.1 Information on likely routes of exposure:

Inhalation: May cause respiratory sensitization

Ingestion: No data

Skin contact: May cause skin sensitization

Eye contact: May cause eye irritation

**11.2 Symptoms related to physical, chemical and toxicological characteristics:** No available data for mixture itself

**11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:** No available data for mixture itself.

## 12 Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** No further relevant information available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**12.4 Mobility in soil:** No further relevant information available.

**12.5 Results of PBT and vPvB assessment:**

PBT: Not applicable.

vPvB: Not applicable.

**12.6 Additional ecological information** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

## 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 regulated

### IATA

**UN number:** UN3082  
**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diethylmethylbenzenediamine)  
**Hazard Class:** 9  
**Packing Group:** III  
**Labels(s):** 9  
**Marine Pollutant:** Yes

### IMDG

**UN number:** UN3082  
**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diethylmethylbenzenediamine)  
**Hazard Class:** 9  
**Packing Group:** III  
**Labels(s):** 9  
**Marine Pollutant:** Yes

Revision Date 08.15.2024

Revision: 2

**Transport/ Additional information:** Not regulated when carried in single or combination packaging containing a net quantity of 5 L or less for liquids or 5 kg or less for solids per the following:

DOT: 171.4 (2)  
 ADR: SP 375  
 IMDG: 2.10.2.7  
 IATA: special provision A197

## 15 Regulatory Information

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

#### United States (USA)

##### SARA

<b>Section 355 (extremely hazardous substances):</b>
None of the ingredients is listed.
<b>Section 313 (Specific toxic chemical listings):</b>
Component(s) above 'de minimus' level: None
<b>TSCA (Toxic Substances Control Act):</b>
All the ingredients are listed.

##### Proposition 65 (California):

Chemicals known to cause cancer: None

#### Canada

<b>Canadian Domestic Substances List (DSL):</b>
All ingredients are listed.
<b>Canadian Ingredient Disclosure list (limit 0.1%):</b>
None of the ingredients is listed.
<b>Canadian Ingredient Disclosure list (limit 1%):</b>
None of the ingredients is listed.

**15.2 Chemical Safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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 Labelling 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)

Revision Date 08.15.2024

Revision: 2

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

### 1.1 Product identifier

Trade name: Edge-Pro 90 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

Mailing Address:

PO Box 2217  
 Concord, NH 03302

Shipping Address:

8 Integra Dr.  
 Concord, NH 03301  
 Phone: 603-224-6122

Toll Free: 800-223-6680

Email: info@metzgermcguire.com

### 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.  
 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.

**HMS 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	5-15%

**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.

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.

**Further information about storage conditions:** Formation of CO<sub>2</sub> 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 <sup>3</sup> ; CLV 0.02 ppm 0.2 mg/m <sup>3</sup> ;
	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

<b>Form:</b>	Liquid
<b>Colour:</b>	Clear
<b>Odour:</b>	Faint aromatic
<b>Odour threshold:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point/range:</b>	< 0 °C
<b>Boiling point/range:</b>	> 200 °C
<b>Flash point:</b>	> 200 °C
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gaseous):</b>	Not applicable
<b>Upper/lower flammability or explosive limit:</b>	Not applicable
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Relative Density at 20°C:</b>	1.10 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with water:</b>	Reacts with water
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto/Self-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	1,000 – 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 alkalies. 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 (FEV<sub>1</sub>, 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:** 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

### 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	Chemical name	
101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	
CERCLA RQ	CAS Number	Chemical name
5000 LBS	101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)

**State regulations**

State RTK	CAS Number	Chemical name
NJ	26447-40-5	Methylenediphenyl diisocyanate
MA, NJ, PA	101-68-8	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)