

# SAFETY DATA SHEET



Urethane 45-60-80 Resin

## Section 1. Identification

**GHS product identifier** : Urethane 45-60-80 Resin  
**Product code** : 105101  
**Other means of identification** : Not available.  
**Color** : Colorless.  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Two-component glue-Polyurethane liquid.-Resin

#### Uses advised against

Not applicable.

**Supplier's details** : WEICON GmbH & Co. KG  
Königsberger Str. 255,  
48157 Münster, Germany  
phone:+49 251 93220,  
email: info@weicon.de,  
URL: www.weicon.de

**e-mail address of person responsible for this SDS** : msds@weicon.de

**Emergency telephone number (with hours of operation)** : +1 202 464 2554  
TRANSPORT (24 Hours/Day): +1 202 464 2554

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : EYE IRRITATION - Category 2A  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 - Suspected of causing cancer.

### Precautionary statements

**Prevention** : P201 - Obtain special instructions before use.  
P261 - Avoid breathing vapor.  
P280 - Wear protective gloves, protective clothing and eye or face protection.

**Response** : Not applicable.

## Section 2. Hazards identification

<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: P501 - Dispose of waste according to applicable legislation.
<b>Hazards not otherwise classified</b>	: None known.
<b>Hazards identified when used</b>	: No known significant effects or critical hazards.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.

Ingredient name	Synonyms	%	Identifiers
Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene	Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene; Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene; Polypropyleneoxydiols, toluene 2,4-diisocyanate polymer; $\alpha$ -Hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] polymer with 2,4-diisocyanato-1-methylbenzene; 2,4-Diisocyanatotoluene-polypropylene glycol copolomer	$\geq 65 - \leq 85$	CAS: 37273-56-6
Hexamethylene diisocyanate, oligomers	Hexane, 1,6-diisocyanato-, homopolymer; Hexamethylene diisocyanate, homopolymer; Hexamethylene diisocyanate polymer; Isocyanic acid, hexamethylene ester; Hexamethylene diisocyanate (HDI) homopolymer; Poly (hexamethylene diisocyanate); Polymer of 1,6-diisocyanatohexane; Trimer of isocyanate monomer (including crude tolylene diisocyanate, polymethylene polyphenyl polyisocyanate), and polymer thereof (i.e. isocyanurate-containing isocyanate).; Polymer (i.e.urethodione group bearing isocyanate) of isocyanate monomer; Condensate (i.e. carbodiimide group-bearing isocyanate) or isocyanate monomer; 1,6-Diisocyanatohexane homopolymer	$\geq 3 - \leq 7$	CAS: 28182-81-2
HDI oligomers, uretdione	HDI dimer; HDI Uretdione	$\geq 1 - \leq 5$	-
4-methyl-m-phenylene diisocyanate	toluene-2,6-di-isocyanate; Benzene, 2,4-diisocyanato-	$\geq 0.1 - \leq 1$	CAS: 584-84-9

## Section 3. Composition/information on ingredients

	1-methyl-; Toluene-2,4-diisocyanate; Benzene, 2,4-diisocyanato-1-methyl-, (toluene diisocyanate); Toluene-2,4-diisocyanate (TDI); TDI; 2,4-Toluene diisocyanate; 2,4-TDI; 2,4-DIISOCYANATO-1-METHYLBENZENE; Toluene diisocyanite; Toluene 2,4-diisocyanate		
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Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

## Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
Hydrogen cyanide (HCN).

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<b>Ingredient name</b>	<b>Exposure limits</b>
Poly[oxy(methyl-1,2-ethanediy)], $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene	None.
Hexamethylene diisocyanate, oligomers	None.
HDI oligomers, uretdione	None.
4-methyl-m-phenylene diisocyanate	<b>NIOSH REL (United States, 10/2020) NIA.</b> <b>CAL OSHA PEL (United States, 1/2025)</b> STEL 15 minutes: 0.15 mg/m <sup>3</sup> . STEL 15 minutes: 0.02 ppm. C: 0.02 ppm. TWA 8 hours: 0.04 mg/m <sup>3</sup> . TWA 8 hours: 0.005 ppm. <b>OSHA PEL (United States, 5/2018)</b> CEIL: 0.02 ppm. CEIL: 0.14 mg/m <sup>3</sup> . <b>OSHA PEL 1989 (United States, 3/1989)</b> TWA 8 hours: 0.01 ppm. TWA 8 hours: 0.04 mg/m <sup>3</sup> .

## Section 8. Exposure controls/personal protection

STEL 15 minutes: 0.02 ppm.  
 STEL 15 minutes: 0.15 mg/m<sup>3</sup>.  
**ACGIH TLV (United States, 1/2025)**  
**[Toluene diisocyanate, -2,4- or 2,6- (or as a mixture)]** A3. Absorbed through skin , Skin sensitizer , Inhalation sensitizer.  
 STEL 15 minutes: 0.005 ppm. Form: Inhalable fraction and vapor.  
 TWA 8 hours: 0.001 ppm. Form: Inhalable fraction and vapor.

### Biological exposure indices

Ingredient name	Exposure indices
4-methyl-m-phenylene diisocyanate	<b>ACGIH BEI (United States, 1/2025) [toluene diisocyanate-2,4- or 2,6- or as a mixture of isomers]</b> BEI: 5 µg/g creatinine, toluene diamine [in urine]. Sampling time: end of shift.

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : ; Viton® , Butyl rubber gloves.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapor (Type A) and particulate filter  
 Recommended : inorganic gases/vapors filter (Type B)

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Colorless.
<b>Odor</b>	: Characteristic.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not applicable.
<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point or initial boiling point and boiling range</b>	: >300°C (>572°F)
<b>Flash point</b>	: Closed cup: >100°C (>212°F)
<b>Fire point</b>	: >200°C (>392°F)
<b>Evaporation rate</b>	: Not available.
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Not available.
<b>Vapor pressure</b>	:

Ingredient name	Vapor Pressure at 20 °C			Vapor pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
4-methyl-m-phenylene diisocyanate	0.0105	0.0014	EU A.4			
Hexamethylene diisocyanate, oligomers	0.000018	0.0000024	EU A.4			

<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Density</b>	: 1.1 g/cm <sup>3</sup> [20°C (68°F)]
<b>Solubility in water</b>	: Not available.
<b>Miscible with water</b>	: No.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	:

Ingredient name	°C	°F	Method
4-methyl-m-phenylene diisocyanate	620	1148	

<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Dynamic (room temperature): 675000 mPa·s (675000 cP) Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.

### Particle characteristics

<b>Median particle size</b>	: Not applicable.
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## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.

## Section 10. Stability and reactivity

**Conditions to avoid** : No specific data.

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

##### **Product/ingredient name**

Hexamethylene diisocyanate, oligomers

4-methyl-m-phenylene diisocyanate

##### **Result**

**Rat - Inhalation - LC50 Dusts and mists**

18500 mg/m<sup>3</sup> [1 hours]

**Rat - Oral - LD50**

5800 mg/kg

Toxic effects: Gastrointestinal - Other changes

**Rat - Inhalation - LC50 Gas.**

14 ppm [4 hours]

Toxic effects: Eye - Lacrimation Behavioral - Excitement Lung, Thorax, or Respiration - Dyspnea

**Conclusion/Summary [Product]** : Not available.

#### Skin corrosion/irritation

##### **Product/ingredient name**

Hexamethylene diisocyanate, oligomers

4-methyl-m-phenylene diisocyanate

##### **Result**

**Rabbit - Skin - Moderate irritant**

Amount/concentration applied: 500 mg

**Rat - Skin - Moderate irritant**

Duration of treatment/exposure: 8 hours

Amount/concentration applied: 12 mg

**Rabbit - Skin - Moderate irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

**Rabbit - Skin - Severe irritant**

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

##### **Product/ingredient name**

Hexamethylene diisocyanate, oligomers

4-methyl-m-phenylene diisocyanate

##### **Result**

**Rabbit - Eyes - Moderate irritant**

Amount/concentration applied: 100 mg

**Rabbit - Eyes - Severe irritant**

Amount/concentration applied: 100 mg

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

## Section 11. Toxicological information

Not available.

### Skin

**Conclusion/Summary [Product]** : Not available.

### Respiratory

**Conclusion/Summary [Product]** : Not available.

### Germ cell mutagenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
4-methyl-m-phenylene diisocyanate	-	2B	Reasonably anticipated to be a human carcinogen.

### Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

#### Product/ingredient name

#### Result

Hexamethylene diisocyanate, oligomers

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

HDI oligomers, uretdione

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

4-methyl-m-phenylene diisocyanate

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact** : May cause an allergic skin reaction.

## Section 11. Toxicological information

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary [Product]** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Urethane 45-60-80 Resin	N/A	N/A	N/A	171.4	74.0
Hexamethylene diisocyanate, oligomers	N/A	N/A	N/A	N/A	4.625
HDI oligomers, uretdione	N/A	N/A	N/A	3	N/A
4-methyl-m-phenylene diisocyanate	5800	N/A	100	N/A	N/A

## Section 12. Ecological information

### Toxicity

#### Product/ingredient name

4-methyl-m-phenylene diisocyanate

#### Result

**Acute - LC50 - Fresh water**

US EPA

Fish - Fathead minnow - *Pimephales promelas*

164.5 mg/l [96 hours]

Effect: Mortality

**Conclusion/Summary [Product]** : Not available.

### Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	367.7	Low
4-methyl-m-phenylene diisocyanate	3.43	-	Low

### Mobility in soil

**Soil/Water partition coefficient** : Not available.

### Other adverse effects

No known significant effects or critical hazards.


## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
<b>UN number</b>	UN3082	Not available.	Not available.	Not available.	Not available.

## Section 14. Transport information

<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-methyl-m-phenylene diisocyanate)	Not available.	Not available.	Not available.	Not available.
<b>Transport hazard class(es)</b>	9 	Not available.	Not available.	Not available.	Not available.
<b>Packing group</b>	III	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.

### Additional information

#### DOT Classification

: **Reportable quantity** 18181.8 lbs / 8254.5 kg [1982.4 gal / 7504.1 L]. The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

TSCA 8(c) calls for record of SAR: 4-methyl-m-phenylene diisocyanate

### TSCA 12(b) - Chemical export notification

Name	One time notification		Annual notification		
	4	5	5(f)	6	7
4-methyl-m-phenylene diisocyanate	Not listed	Listed	Not listed	Not listed	Not listed

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

## Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
4-methyl-m-phenylene diisocyanate	≥0.1 - ≤1	Yes.	500	-	100	-

**SARA 304 RQ** : 18181.8 lbs / 8254.5 kg [1982.4 gal / 7504.1 L]

### SARA 311/312

**Classification** : EYE IRRITATION - Category 2A  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2

### Composition/information on ingredients

Name	%	Classification
Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, polymer with 2,4-diisocyanato- 1-methylbenzene	≥65 - ≤85	EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
Hexamethylene diisocyanate, oligomers	≥3 - ≤7	ACUTE TOXICITY (inhalation) - Category 4 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
HDI oligomers, uretdione	≥1 - ≤5	ACUTE TOXICITY (inhalation) - Category 3 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
4-methyl-m-phenylene diisocyanate	≥0.1 - ≤1	ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	4-methyl-m-phenylene diisocyanate	584-84-9	≥0.1 - ≤1
<b>Supplier notification</b>	4-methyl-m-phenylene diisocyanate	584-84-9	≥0.1 - ≤1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**Massachusetts** : None of the components are listed.  
**New York** : None of the components are listed.  
**New Jersey** : The following components are listed: TOLUENE-2,4-DIISOCYANATE  
**Pennsylvania** : None of the components are listed.

### California Prop. 65

**⚠ WARNING:** This product can expose you to Toluene diisocyanate, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Toluene diisocyanate	Yes.	-

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

## Section 15. Regulatory information

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



### Procedure used to derive the classification

**Section 16. Other information**

Classification	Justification
EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2	Calculation method Calculation method Calculation method Calculation method

**History**

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**Key to abbreviations**

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 DOT = Department of Transportation  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 SGG = Segregation Group  
 TDG = Transportation of Dangerous Goods  
 UN = United Nations

**References**

: Not available.

☑ Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.