Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Trufast Roofing Adhesive - Part A (Tanks)

Synonyms
Diphenylmethane Diisocynate

Chemical Family
aromatic isocyanates

Product Use
Polyurethane Component, Industrial Chemicals

Restrictions on Use
Suitable for use in industrial sector: Polymers Industry, Chemical Industry

The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Manufacturer Information:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Phone: 973-245-6000
Emergency Phone #:
CHEMTREC: 800-424-9300
BASF HOTLINE: 800-832-4357

Supplier Information:
Altenloh, Brinck & Co.
02105 Williams County Road 12-C
Bryan, OH 43506, USA

Phone: 800-443-9602

Section 2 - HAZARDS IDENTIFICATION


Classification of the product
Acute Tox. 4 (Inhalation - mist) Acute toxicity
Eye Dam./Irrit. 2B Serious eye damage/eye irritation
Skin Corr./Irrit. 2 Skin corrosion/irritation
Skin Sens 1B Skin sensitization
Resp. Sens. 1 Respiratory sensitization
STOT SE 3 (irritating to resp. system) Specific target organ toxicity-single exposure
STOT RE 2 (by inhalation) Specific target organ toxicity-repeated exposure
Press. Gas Compr. Gas Gases under pressure
Simple Asphyxiant Simple Asphyxiant (1) Simple Asphyxiant

GHS Label Elements Symbol(s)

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Safety Data Sheet

Material Name: Trufast Roofing Adhesive - Part A (Tanks)

Signal Word
Danger

Hazard Statement(s)
H280 Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.
H320 Causes eye irritation.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statement(s)
Prevention
P280 Wear protective gloves.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P261 Avoid breathing mist.
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.

Response
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.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Storage
P410 + P403 Protect from sunlight. Store in well-ventilated place.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified
No specific dangers known, if the regulations/notes for storage and handling are considered.
Safety Data Sheet

Material Name: Trufast Roofing Adhesive - Part A (Tanks)

Labeling of special preparations (GHS):
CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHTLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS


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<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
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<tbody>
<tr>
<td>101-68-8</td>
<td>&gt;= 25.0 - &lt; 50.0%</td>
<td>Diphenylmethane-4,4'-diisocyanate (MDI)</td>
</tr>
<tr>
<td>26447-40-5</td>
<td>&gt;= 3.0 - &lt; 7.0%</td>
<td>Methylenediphenyl diisocyanate</td>
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<tr>
<td>9016-87-9</td>
<td>&gt;= 25.0 - &lt; 75.0%</td>
<td>P-MDI</td>
</tr>
<tr>
<td>57636-09-6</td>
<td>&gt;= 1.0 - &lt; 3.0%</td>
<td>Isocyanic acid, polymethylene polyphenylene ester, polymer with \alpha-\omega-hydroxy poly (oxy-1,2-ethanediyl)</td>
</tr>
<tr>
<td>17589-24-1</td>
<td>&gt;= 0.3 - &lt; 1.0%</td>
<td>1,3-Diazetidine-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl)methyl][phenyl]-</td>
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<tr>
<td>811-97-2</td>
<td>&gt;= 3.0 - &lt; 5.0%</td>
<td>HFC-134A</td>
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This product contains:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;= 0.0 - &lt; 1.0%</td>
<td>Nitrogen, used for cylinder pressurization only.</td>
</tr>
</tbody>
</table>

Section 4 - FIRST AID MEASURES

Description of first aid measures

General advice:
Remove contaminated clothing.

If Inhaled:
Remove the affected individual to 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, see 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.
Section 4 - FIRST AID MEASURES

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting.

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.

Indication of any immediate medical attention and special treatment needed
Note to physician
Antidote: Specific antidotes or neutralizers to isocyanates do not exist.
Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media:
water spray, dry powder, carbon dioxide, foam

Special hazards arising from substance or mixture:
Hazards during fire-fighting:
nitrous gases, fumes/smoke, isocyanate, vapour

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further 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.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Use personal protective clothing.
Environmental Precautions  Do not discharge into drains/surface waters/groundwater.

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.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal. For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes. Dike spillage.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Provide suitable 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 or drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:
No explosion proofing necessary.

Conditions for Safe Storage, Including any Incompatibilities
Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on 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.

Storage stability:
Storage temperature: 16 - 27 °C

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with exposure limits
Diphenylmethane-4,4'-diisocyanate (MDI)  OSHA PEL  CLV  0.02 ppm  0.2 mg/m3 ; CLV  0.02 ppm  0.2 mg/m3 ;

ACGIH TLV  TWA value  0.005 ppm ;
Safety Data Sheet

Material Name: Trufast Roofing Adhesive - Part A (Tanks)

P-MDI  OSHA PEL  CLV  0.02 ppm  0.2 mg/m3  ;  CLV  0.02 ppm  0.2 mg/m3  ;
       ACGIH TLV  TWA value  0.005 ppm ;

Advice on system design:
Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

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.

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.

General safety and hygiene 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.
Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>faintly aromatic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Colour</td>
<td>amber</td>
</tr>
<tr>
<td>pH value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; -19.00 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>200.00 °C (5.000000 mmHg)</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200.00 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td>not flammable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>For liquids not relevant for classification and labeling.</td>
</tr>
<tr>
<td>Autoignition</td>
<td>&gt; 470 °C</td>
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<tr>
<td>Vapour pressure</td>
<td>&lt; 0.00001 mmHg</td>
</tr>
<tr>
<td>Density</td>
<td>1.2220 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Partitioning coefficient</td>
<td>Unspecified</td>
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<tr>
<td>n-octanol/water (log Pow)</td>
<td></td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>Based on its structural properties the product is not classified as self-igniting.</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No decomposition if stored and handled as prescribed/indicated.</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>200.000 mPa.s</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Miscibility in water</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Solubility (quantitative)</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Solubility (qualitative)</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Value can be approximated from Henry's Law Constant or vapor pressure.</td>
</tr>
</tbody>
</table>

Other Information
If necessary, information on other physical and chemical parameters is indicated in this section.
Section 10 - STABILITY AND REACTIVITY

Reactivity

Corrosion to metals:
No Corrosive effect on metal expected.

Oxidizing properties:
Not an oxidizer.

Chemical Stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Conditions to avoid
Avoid moisture

Incompatible materials
acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates.

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

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Primary 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.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Inhalation of vapours may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.
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

Assessment other acute effects
Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Irritation/Corrosion
Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin
Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Species: rabbit
Result: Irritating.
Method: Draize test

Eye
Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Species: rabbit
Result: Irritating.
Method: Draize test

Sensitization
Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure.
Safety Data Sheet  
Material Name: Trufast Roofing Adhesive - Part A (Tanks)

Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Information on: Diphenylmethane-4,4’-diisocyanate (MDI) Buehler test  
Species: guinea pig  
Result: sensitizing

Mouse Local Lymph Node Assay (LLNA)  
Species: mouse  
Result: sensitizing  
Can cause skin sensitization

other  
Species: guinea pig  
Result: sensitizing  
Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Aspiration Hazard  
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity  
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.

Information on: Diphenylmethane-4,4’-diisocyanate (MDI)  
Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m3, olfactory epithelium  
NOAEL: 0.2 mg/m3  
LOAEL: 1 mg/m3

The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Genetic toxicity  
Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.
Reproductive toxicity
Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.
Safety Data Sheet

Material Name: Trufast Roofing Adhesive - Part A (Tanks)

Teratogenicity
Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development
OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m3
NOAEL Mat.: 4 mg/m3
NOAEL Teratog.: 4 mg/m3
The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure
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, 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.

Section 12 - ECOLOGICAL INFORMATION

Toxicity
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 maybe 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)
Safety Data Sheet
Material Name: Trufast Roofing Adhesive - Part A (Tanks)

Aquatic plants
EC₅₀ (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge
Toxicity to microorganisms
OECD Guideline 209 aquatic
aerobic bacteria from a domestic water treatment plant/EC₅₀ (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H₂O)
Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information
0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water
In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)
t₁/₂ 20 h (25 °C)

Bioaccumulative Potential

Assessment bioaccumulation potential
Significant accumulation in organisms is not to be expected.

Bioaccumulation potential
Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

Mobility in soil
Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:
Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:
CYLINDERS:
Return to the manufacturer with residual pressure. If cylinder is damaged, please contact supplier. Empty cylinders (all sizes) must be depressurized before they are returned to supplier. Depressurization will not relieve all pressure. Always seal cylinder valves for return.
Section 14 - TRANSPORT INFORMATION

Containers Greater Than 100 cu. Cm. (1 liter)
Ground - UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen)
2.2 (Non-Flammable Gas Label)

Air - UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen)
2.2 (Non-Flammable Gas Label)

Water - UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen)
2.2 (Non-Flammable Gas Label)

Section 15 - REGULATORY INFORMATION

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic, Sudden release of pressure

EPCRA 313:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8</td>
<td>Diphenylmethane-4,4’-diisocyanate (MDI)</td>
</tr>
<tr>
<td>9016-87-9</td>
<td>P-MDI</td>
</tr>
</tbody>
</table>

CERCLA RQ

<table>
<thead>
<tr>
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<th>Chemical name</th>
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<tr>
<td>101-68-8; 9016-87-9</td>
<td>Diphenylmethane-4,4’-diisocyanate (MDI); P-MDI</td>
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State regulations

State RTK

<table>
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<th>Chemical Name</th>
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<tr>
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</tr>
<tr>
<td></td>
<td>P-MDI</td>
</tr>
<tr>
<td></td>
<td>Methylene diphenyl diisocyanate</td>
</tr>
<tr>
<td>PA</td>
<td>Diphenylmethane-4,4’-diisocyanate (MDI)</td>
</tr>
<tr>
<td></td>
<td>P-MDI</td>
</tr>
</tbody>
</table>

NFPA Hazard codes:

Health: 2  Fire: 1  Reactivity: 1  Special:

HMIS III rating:

Health: 2  Flammability: 1  Physical hazard: 1
We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET