

### SAFETY DATA SHEET

TAMPUR 130

According to Regulation (EC) No 1907/2006, Annex II

SECTION 1: Identification of the substance/mixture and of the company/undertaking		
1.1. Product identifier		
Product name	TAMPUR 130	
Product number	100074578 - 44	
1.2. Relevant identified uses of	of the substance or mixture and uses advised against	
Identified uses	Semi-Flexible Polyurethane Grout	
1.3. Details of the supplier of the supplication of the suppli	the safety data sheet	
Supplier	NORMET UK LTD UNIT 5 WHELER ROAD, SEVEN STARS INDUSTRIAL ESTATE, COVENTRY, CV3 4LB 0333 2409966 SDS@NORMET.COM	
1.4. Emergency telephone number		
Emergency telephone	+44 (0) 207 858 1228 - 24 hours	
SECTION 2: Hazards identification		
2.1. Classification of the subs	tance or mixture	
Classification (EC 1272/2008)		
Physical hazards	Not Classified	
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	
Environmental hazards	Aquatic Chronic 3 - H412	
2.2. Label elements		
Pictogram		
(!)		
Signal word	Danger	
Hazard statements	<ul> <li>H315 Causes skin irritation.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H319 Causes serious eye irritation.</li> <li>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</li> <li>H335 May cause respiratory irritation.</li> <li>H351 Suspected of causing cancer.</li> <li>H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>H412 Harmful to aquatic life with long lasting effects.</li> </ul>	

30-60%

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Precautionary statements	<ul> <li>P202 Do not handle until all safety precautions have been read and understood.</li> <li>P261 Avoid breathing vapour/ spray.</li> <li>P264 Wash contaminated skin thoroughly after handling.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> <li>P284 [In case of inadequate ventilation] wear respiratory protection.</li> <li>P302+P352 IF ON SKIN: Wash with plenty of water.</li> <li>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> </ul>
Contains	Isocyanic Acid, polymethylenepolyphenylene ester, Diphenylmethane 4,4' - diisocyanate, Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alphahydroomega hydroxypoly(oxy(methyl-1,2-ethanediyl)), Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate
Supplementary precautionary statements	<ul> <li>P201 Obtain special instructions before use.</li> <li>P260 Do not breathe vapour/ spray.</li> <li>P271 Use only outdoors or in a well-ventilated area.</li> <li>P272 Contaminated work clothing should not be allowed out of the workplace.</li> <li>P308+P313 IF exposed or concerned: Get medical advice/ attention.</li> <li>P312 Call a POISON CENTER/ doctor if you feel unwell.</li> <li>P314 Get medical advice/ attention if you feel unwell.</li> <li>P321 Specific treatment (see medical advice on this label).</li> <li>P332+P313 If skin irritation occurs: Get medical advice/ attention.</li> <li>P333+P313 If eye irritation or rash occurs: Get medical advice/ attention.</li> <li>P337+P313 If eye irritation persists: Get medical advice/ attention.</li> <li>P362+P364 Take off contaminated clothing and wash it before reuse.</li> <li>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</li> <li>P405 Store locked up.</li> <li>P501 Dispose of contents/ container in accordance with national regulations.</li> </ul>

#### 2.3. Other hazards

**HSNO Classification** 

### SECTION 3: Composition/information on ingredients

3.2. Mixtures

#### Isocyanic Acid, polymethylenepolyphenylene ester

CAS number: 9016-87-9

#### Classification

Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Diphenylmethane 4,4' - diisocya	ate	10-30%
CAS number: 101-68-8	EC number: 202-966-0	
Classification		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Carc. 2 - H351		
STOT SE 3 - H335		
STOT RE 2 - H373		
DIPROPYLENEGLYCOL DIBEN	ZOATE	5-10%
CAS number: 27138-31-4		
Classification		
Aquatic Chronic 3 - H412		
Isocyanic acid, polymethylenepo		1-5%
with .alphahydroomegahydro	xypoly(oxy(methyl-1,2-	
ethanediyl))		
CAS number: 53862-89-8		
Classification		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
STOT SE 3 - H335		
STOT RE 2 - H373		
Reaction mass of 4,4'-methylene	diphenyl diisocyanate and	<19
o-(p-isocyanatobenzyl)phenyl iso	cyanate	
CAS number: —		
Classification		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
STOT SE 3 - H335		
STOT RE 2 - H373		
The full text for all hazard stateme	nts is displayed in Section 16.	
SECTION 4: First aid measures		

4.1. Description of first aid measures

General information	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention. Treat symptomatically.		
Inhalation	IF INHALED: Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting.		
Ingestion	IF SWALLOWED: Get medical attention immediately. If throat irritation or coughing persists, proceed as follows. Rinse mouth thoroughly with water. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Stop if the affected person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.		
Skin contact	IF ON SKIN (or hair): Rinse immediately with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention if irritation persists after washing. Remove contaminated clothing.		
Eye contact	IF IN EYES: Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if irritation persists after washing.		
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.		
4.2. Most important symptoms	and effects, both acute and delayed		
General information	The product contains a sensitising substance. Treat symptomatically.		
Inhalation	The product contains a sensitising substance.		
Ingestion	May cause stomach pain or vomiting. May cause irritation. Gastrointestinal symptoms, including upset stomach.		
Skin contact	The product contains a sensitising substance. May cause skin irritation.		
Eye contact	May cause serious eye damage.		
4.3. Indication of any immedia	4.3. Indication of any immediate medical attention and special treatment needed		
Notes for the doctor	Treat symptomatically.		
Specific treatments	Treat symptomatically.		
SECTION 5: Firefighting meas	sures		
5.1. Extinguishing media			
Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.		
Unsuitable extinguishing media	Do not use water, if avoidable.		
5.2. Special hazards arising from	om the substance or mixture		
Specific hazards	The product is not flammable. Irritating gases or vapours.		
Hazardous combustion products	Harmful gases or vapours.		
5.3. Advice for firefighters			
Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Stop leak if safe to do so. If leakage cannot be stopped, evacuate area. Move containers from fire area if it can be done without risk.		
Special protective equipment for firefighters	Use air-supplied respirator, gloves and protective goggles.		

#### SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Follow precautions for safe handling described in this safety data sheet. For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evaluate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. 6.2. Environmental precautions **Environmental precautions** Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. 6.3. Methods and material for containment and cleaning up

Methods for cleaning up If leakage cannot be stopped, evacuate area. Move containers from spillage area. Large Spillages: Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely. Small Spillages: Absorb small quantities with paper towels and evaporate in a safe place. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

#### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Usage precautions	For professional users only. Do not handle until all safety precautions have been read and understood. Use only in well-ventilated areas. Protect from moisture. Keep container dry. Container must be kept tightly closed when not in use. Do not eat, drink or smoke when using this product.	
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Provide eyewash station. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated.	
7.2. Conditions for safe storage, including any incompatibilities		
Storage precautions	Store at temperatures between 4°C and 30°C. Do not store near heat sources or expose to high temperatures. Store away from the following materials: Acids. Alkalis. Protect from moisture.	
Storage class	Water-reactive storage.	
7.3. Specific end use(s)		
Specific end use(s)	The identified uses for this product are detailed in Section 1.2.	
SECTION 8: Exposure Controls/personal protection		

#### 8.1. Control parameters

#### Occupational exposure limits

#### Isocyanic Acid, polymethylenepolyphenylene ester

Long-term exposure limit (8-hour TWA): EH40/2005 WELs (UK), 12/2011. Skin sensitiser 0.07 mg/m<sup>3</sup>, (as NCO) 8 hour(s). Short-term exposure limit (15-minute): EH40/2005 WELs (UK), 12/2011. Skin sensitiser 0.07 mg/m<sup>3</sup>, (as NCO)

#### Diphenylmethane 4,4' - diisocyanate

Long-term exposure limit (8-hour TWA): EH40/2005 WELs (UK), 12/2011. Skin sensitiser 0.07 mg/m<sup>3</sup>, (as NCO) 8 hour(s). Short-term exposure limit (15-minute): EH40/2005 WELs (UK), 12/2011. Skin sensitiser 0.07 mg/m<sup>3</sup>, (as NCO)

#### Polyether modified polysiloxane

Contains no substances with occupational exposure limit values (Germany).

#### Isocyanic Acid, polymethylenepolyphenylene ester (CAS: 9016-87-9)

	DIPROPYLENEGLYCOL DIBENZOATE (CAS: 27138-31-4)
	- Soil; 1 mg/kg - STP; 1 mg/l
PNEC	- Fresh water; 1 mg/l - Marine water; 0.1 mg/l
DNEL	<ul> <li>Workers - Dermal; Short term systemic effects: 50 mg/kg/day</li> <li>Workers - Inhalation; Short term systemic effects: 0.1 mg/m<sup>3</sup></li> <li>Workers - Dermal; Short term local effects: 28.7 mg/cm<sup>2</sup></li> <li>Workers - Inhalation; Short term local effects: 0.1 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Long term systemic effects: 0.05 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Long term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Dermal; Short term systemic effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term systemic effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Oral; Short term systemic effects: 17.2 mg/cm<sup>2</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Short term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Long term systemic effects: 0.025 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Long term local effects: 0.025 mg/m<sup>3</sup></li> </ul>
PNEC	<ul> <li>Fresh water; 1 mg/l</li> <li>Marine water; 0.1 mg/l</li> <li>Soil; 1 mg/kg</li> <li>STP; 1 mg/l</li> <li>Intermittent release; 10 mg/l</li> </ul> Diphenylmethane 4,4' - diisocyanate (CAS: 101-68-8)
DNEL	<ul> <li>Workers - Dermal; Short term systemic effects: 50 mg/kg</li> <li>Consumer - Dermal; Short term systemic effects: 25 mg/kg</li> <li>Consumer - Inhalation; Short term systemic effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Oral; Short term systemic effects: 20 mg/kg/day</li> <li>Consumer - Dermal; Short term local effects: 17.2 mg/cm<sup>2</sup></li> <li>Consumer - Inhalation; Long term systemic effects: 0.025 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Short term local effects: 0.1 mg/m<sup>3</sup></li> <li>Workers - Dermal; Short term local effects: 28.7 mg/cm<sup>2</sup></li> <li>Workers - Inhalation; Short term systemic effects: 0.1 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Long term systemic effects: 0.1 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Long term systemic effects: 0.05 mg/m<sup>3</sup></li> <li>Workers - Inhalation; Long term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Long term local effects: 0.05 mg/m<sup>3</sup></li> <li>Consumer - Inhalation; Long term local effects: 0.05 mg/m<sup>3</sup></li> </ul>

DNEL	Dipropyleneglycol dibenzoate Workers, Industry/Professional - Dermal; Short term systemic effects: 170 mg/kg/day Workers, Industry/Professional - Inhalation; Short term systemic effects: 35.08 mg/m <sup>3</sup> Workers, Industry/Professional - Dermal; Long term systemic effects: 10 mg/kg Workers, Industry/Professional - Inhalation; Long term systemic effects: 8.8 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 80 mg/kg/day General population - Inhalation; Short term systemic effects: 8.7 mg/m <sup>3</sup> General population - Oral; Short term systemic effects: 8.69 mg/m <sup>3</sup> General population - Dermal; Long term systemic effects: 8.69 mg/m <sup>3</sup> General population - Inhalation; Long term systemic effects: 5 mg/kg/day General population - Oral; Long term systemic effects: 5 mg/kg/day diethylene glycol dibenzoate Workers, Industry/Professional - Dermal; Short term systemic effects: 160 mg/kg/day Workers, Industry/Professional - Dermal; Long term systemic effects: 17.7 mg/kg/day Workers, Industry/Professional - Dermal; Long term systemic effects: 5.8 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 5.7 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 5.8 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 5.8 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 5.7 mg/m <sup>3</sup> General population - Dermal; Short term systemic effects: 6.8 mg/kg/day General population - Oral; Short term systemic effects: 8.7 mg/m <sup>3</sup> General population - Oral; Short term systemic effects: 8.7 mg/m <sup>3</sup> General population - Oral; Short term systemic effects: 0.8 mg/kg/day General population - Oral; Long term systemic effects: 1.4 mg/m <sup>3</sup> General population - Dermal; Long term systemic effects: 1.4 mg/m <sup>3</sup> General population - Oral; Long term systemic effects: 0.8 mg/kg/day
PNEC	Dipropyleneglycol dibenzoate - Fresh water; 0.0037 mg/l - Marine water; 0.0037 mg/l - Water, Intermittent release; 0.037 mg/l - Sediment (Freshwater); 1.49 mg/kg - Sediment (Marinewater); 0.149 mg/kg - Soil; 1 mg/kg - Soil; 1 mg/kg - STP; 10 mg/l diethylene glycol dibenzoate - Fresh water; 0.0029 mg/l - Marine water; 0.0029 mg/l - Water, Intermittent release; 0.029 mg/l - Sediment (Freshwater); 0.103 mg/kg - Sediment (Marinewater); 0.103 mg/kg - Soil; 1 mg/kg - STP; 10 mg/l
DNEL	Polyether modified polysiloxane Available hazard data do not support the need for a DNEL to be established for other health effects.

### 8.2. Exposure controls



Environmental exposure controls	Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.
Respiratory protection	Combination filter, type A2/P3.
Hygiene measures	Wash hands thoroughly after handling. Promptly remove any clothing that becomes contaminated. Do not eat, drink or smoke when using this product.
Other skin and body protection	Wear appropriate clothing to prevent skin contamination.
Hand protection	To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Nitrile rubber. Butyl rubber.
Eye/face protection	Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.
Personal protection	Use protective clothing, hand gloves and goggles.
Appropriate engineering controls	This product is not to be used under conditions of poor ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

### **SECTION 9: Physical and Chemical Properties**

### 9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Brown.
Odour	Slight pungent.
Odour threshold	Not determined.
рН	Not determined.
Melting point	Not applicable.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not applicable.
Bulk density	Not applicable.
Solubility(ies)	Not determined.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.

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Viscosity	250-450 mPa s @ 20°C
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not applicable.
Density	1.15g/cm³
Corrosion to Metals	
9.2. Other information	
SECTION 10: Stability and rea	ıctivity
10.1. Reactivity	
Reactivity	Reacts with water and moisture in the air
10.2. Chemical stability	
Stability	Stable at normal ambient temperatures and when used as recommended.
10.3. Possibility of hazardous	reactions
Possibility of hazardous reactions	The following materials may react with the product: Water, moisture.
10.4. Conditions to avoid	
Conditions to avoid	Avoid exposure to high temperatures or direct sunlight.
10.5. Incompatible materials	
Materials to avoid	Avoid contact with the following materials: Strong alkalis. Amines. Alcohols.
10.6. Hazardous decompositio	n products
Hazardous decomposition products	Heating may generate the following products: Hydrogen cyanide (HCN). Carbon dioxide (CO2). Carbon monoxide (CO). Nitrous gases (NOx).
SECTION 11: Toxicological inf	formation
11.1. Information on toxicologi	cal effects
Acute toxicity - inhalation	
Notes (inhalation LC₅₀)	Isocyanic acid, polymethylenepolyphenylene ester 4,4'Methylenediphenyl diisocyanate
ATE inhalation (vapours mg/l)	22.21
Skin corrosion/irritation	
Animal data	Isocyanic acid, polymethylenepolyphenylene ester Test - OECD 404 Acute Dermal Irritation/Corrosion Species - Rabbit Route of Exposure - Skin Result - Mild irritant Product/ingredient name - 4,4'-Methylenediphenyl diisocyanate Test - OECD 404 Acute Dermal Irritation/Corrosion Species - Rabbit Route of exposure - Skin Result - Irritant
Serious eye damage/irritation	

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Serious eye damage/irritation	Product/ingredient name - Isocyanic acid, polymethylenepolyphenylene ester
	Test - OECD 405 Acute Eye Irritation/Corrosion
	Species - Rabbit Route of Exposure - Eyes
	Result - Non-irritant Product/ingredient name - 4,4'-Methylenediphenyl diisocyanate
	Test - OECD 405 Acute Eye Irritation/Corrosion
	Species - Rabbit
	Route of exposure - Eyes
	Result - Non-irritant
Respiratory sensitisation	
Respiratory sensitisation	Isocyanic acid, polymethylenepolyphenylene ester:
	Test - No official guidelines
	Route of exposure - Respiratory
	Species - Guinea pig
	Result - Sensitising 4,4'-Methylenediphenyl diisocyanate:
	Test - No official guidelines
	Route of exposure - Respiratory
	Species - Guinea pig
	Result - Sensitising
Skin sensitisation	
Skin sensitisation	Isocyanic acid, polymethylenepolyphenylene ester:
	Route of exposure - Skin
	Species - Mouse
	Result - Sensitising 4,4'-Methylenediphenyl diisocyanate:
	Route of exposure - Skin
	Species - Mouse
	Result - Sensitising
Carcinogenicity	
Carcinogenicity	Isocyanic acid, polymethylenepolyphenylene ester OECD 453 Combined Chronic Toxicity
	Negative , Inhalation, Rat Carcinogenicity Studies EU Negative , Inhalation, Rat 4,4'-
	Methylenediphenyl diisocyanate OECD 453 Combined Chronic Toxicity, Carcinogenicity Studies EU Positive , Inhalation, Rat
	Studies ED Positive, Initialation, Rat
IARC carcinogenicity	Isocyanic acid, polymethylenepolyphenylene ester - 3
	4,4'-Methylenediphenyl diisocyanate - 3
Reproductive toxicity	
Reproductive toxicity - fertility	Data lacking.
Reproductive toxicity -	Isocyanic acid, polymethylenepolyphenylene ester Teratogenicity: - OECD 414 Prenatal
development	Developmental Toxicity Study: 4 mg/m <sup>3</sup> , NOAEL, Rat 4,4'-Methylenediphenyl diisocyanate
	Teratogenicity: - OECD 414 Prenatal Developmental Toxicity Study: 12 mg/m <sup>3</sup> , NOAEL, Rat
	No evidence of reproductive toxicity in animal studies.
Specific target organ toxicity -	single exposure
STOT - single exposure	Isocyanic acid, polymethylenepolyphenylene ester Category 3 - Inhalation - Respiratory tract
	irritation 4,4'-Methylenediphenyl diisocyanate Category 3 - Inhalation - Respiratory tract
	irritation
Specific target organ toxicity -	
STOT - repeated exposure	Isocyanic acid, polymethylenepolyphenylene ester Category 2 - Inhalation - Respiratory tract
	4,4'-Methylenediphenyl diisocyanate Category 2 - Inhalation - Respiratory tract
Aspiration hazard	
<u> </u>	

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
General information	Mutagenicity: Isocyanic acid, polymethylenepolyphenylene ester Test - OECD 474 Result - Negative Equivocal Product/ingredient name - 4,4'-Methylenediphenyl diisocyanate Test - EU EC B. 13/14 Mutagenicity -Reverse Mutation Testing using Bacteria Result - Negative Test - OECD 474 Mammalian Erythrocyte Micronucleus Test Result - Negative
Skin contact	Conclusion/Summary Skin: Isocyanic acid, polymethylenepolyphenylene ester - Irritating to skin. 4,4'-Methylenediphenyl diisocyanate - Irritating to skin.
Eye contact	The product is irritating to eyes and skin.
Route of entry	Inhalation
Medical symptoms	Symptoms following overexposure may include the following: Wheezing/breathing difficulties. Irritation of eyes and mucous membranes. Skin irritation.

### SECTION 12: Ecological Information

#### 12.1. Toxicity

Acute toxicity - fish	Isocyanic acid, polymethylenepolyphenylene ester OECD 203 Fish, Acute Toxicity Test, Acute LC50, 96 hours: >1000 mg/l, Algae No official guidelines Chronic NOEC, 112 days: >10000 mg/kg, Algae 4,4'-Methylenediphenyl diisocyanate OECD 203 Fish, Acute Toxicity Test, Acute LC50, 96 hours: >1000 mg/l, Algae	
Acute toxicity - aquatic invertebrates	Isocyanic acid, polymethylenepolyphenylene ester OECD 202 Daphnia sp. Acute Immobilisation Test* Acute EC50, 24 hours: >1000 mg/l, Daphnia No official guidelines Chronic NOEC, 112 days: >10000 mg/l, Daphnia OECD 211 Daphnia Magna Reproduction Test, 21 days: >10 mg/l, Daphnia 4,4'-Methylenediphenyl diisocyanate OECD 202 Daphnia sp. Acute Immobilisation Test* Acute EC50, 24 hours: >1000 mg/l, Daphnia OECD 211 Daphnia Magna Reproduction Test, 21 days: >10 mg/l, Daphnia	
Acute toxicity - aquatic plants	Isocyanic acid, polymethylenepolyphenylene ester OECD 201 Alga, Growth Inhibition Test, 72 hours: >1640 mg/l, Fish No official guidelines Chronic NOECr, 112 days: >10000 mg/l, Fish	
Acute toxicity - microorganisms	Isocyanic acid, polymethylenepolyphenylene ester OECD 209 Activated Sludge, Respiration Inhibition Test, 3 hours: >100 mg/l, Bacteria	
12.2. Persistence and degradability		
Persistence and degradability	The product is not biodegradable.	
Biodegradation	Not readily biodegradable.	
12.3. Bioaccumulative potential		
Bioaccumulative potential	Isocyanic acid, polymethylenepolyphenylene ester log Pow: BCF - 200, 4,4'- Methylenediphenyl diisocyanate log Pow: 4,51 BCF,	

Partition coefficient	Not determined.	
12.4. Mobility in soil		
Mobility	The product reacts with water to form a solid, insoluble reaction product which is not biodegradable.	
Adsorption/desorption coefficient	No information available.	
12.5. Results of PBT and vPv	Bassessment	
Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.	
12.6. Other adverse effects		
Other adverse effects	Not known.	
SECTION 13: Disposal consid	derations	
13.1. Waste treatment methods		
General information	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Waste is classified as hazardous waste.	
Disposal methods	Dispose of contents/container in accordance with national regulations. Waste is classified as hazardous waste.	
SECTION 14: Transport inform	mation	
General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).	
14.1. UN number		
Not applicable.		
14.2. UN proper shipping name		
Not applicable.		
14.3. Transport hazard class(es)		
No transport warning sign req	uired.	
14.4. Packing group		
Not applicable.		
14.5. Environmental hazards		
Environmentally hazardous substance/marine pollutant No.		
14.6. Special precautions for user		
Not applicable.		
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code		
Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code		
SECTION 15: Regulatory info	rmation	

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended). EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	<ul> <li>Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.</li> <li>Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (as amended).</li> <li>Commission Regulation (EU) No 453/2010 of 20 May 2010.</li> <li>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).</li> <li>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</li> </ul>
Guidance	Isocyanates: Health hazards and precautionary measures EH16. Workplace Exposure Limits EH40.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### Inventories

#### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

#### SECTION 16: Other information

General information	Only trained personnel should use this material.
Revision date	04/01/2017
Revision	2
Supersedes date	13/08/2015
SDS number	5049
Hazard statements in full	<ul> <li>H315 Causes skin irritation.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H319 Causes serious eye irritation.</li> <li>H332 Harmful if inhaled.</li> <li>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</li> <li>H335 May cause respiratory irritation.</li> <li>H351 Suspected of causing cancer.</li> <li>H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>H412 Harmful to aquatic life with long lasting effects.</li> </ul>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.