

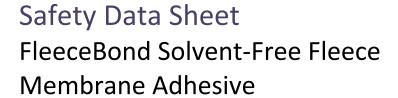


### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Product Identifier		
	Product name	FleeceBond Solvent-Free Fleece Membrane	
		Adhesive	
1.2	Relevant identified uses of the substance or mixture and uses advised against		
	Identified uses	Adhesive	
	Uses advised against	Use only for intended applications	
1.3	Details of the supplier of the safety data sheet	Moy Materials Ltd. Columbia Mills, 14/15 Sir	
		John Rogerson's Quay, Dublin 2, D02 E409	
		Ireland	
		info@moy.group	
1.4	Emergency telephone numbers		
	Emergency telephone	+44 (0) 1827 69662 (NOT 24hrs – 8am – 5pm	
		Mon-Fri)	
	National emergency telephone number	National Poisons Information Service (UK) TEL:	
		0844 892 0111 (healthcare professionals only)	

### **SECTION 2: HAZARD IDENTIFICATION**

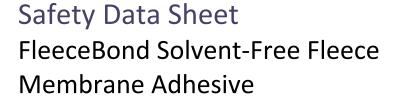
2.1	Classification of the substance or mixture	
	Classification (SI 2019 No. 720)	
	Physical hazards	Not Classified
	Health hazards	Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1
	Environmental hazards	- H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373
		Not Classified
	Human health	May cause sensitisation by inhalation. Contains non-volatile isocyanate. Heating may generate vapours which irritate the
		respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
2	Label elements	
	Hazard pictograms	
	Signal word	Danger
	Hazard statements	H332 Harmful if inhaled.
		H315 Causes skin irritation.
		H319 Causes serious eye irritation.
		H334 May cause allergy or asthma symptoms or breathing
		difficulties if inhaled.
		H317 May cause an allergic skin reaction.
		H351 Suspected of causing cancer.
		H335 May cause respiratory irritation.





	H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P260 Do not breathe vapour/ spray.
•	P280 Wear protective gloves/ protective clothing/ eye
	protection/ face protection.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for
	several minutes. Remove contact lenses, if present and easy to
	do. Continue rinsing.
	P308+P313 IF exposed or concerned: Get medical advice/
	attention.
	P501 Dispose of contents/ container in accordance with nation regulations.
Supplemental label information	EUH204 Contains isocyanates. May produce an allergic reactio
	As from 24 August 2023, adequate training is required before industrial or professional use
Contains	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE, REACTION MASS OF
	4'4 METHYLENEDIPHENYL DIISOCYANATE AND O-(P-
	ISOCYANATOBENZYL)PHENYL
	ISOCYANATE, diphenylmethane-diisocyanate, isomers and
	homologues, 4'4- METHYLENEDIPHENYL DIISOCYANATE,
	OLIGOMERS, 4,4'-Methylenediphenyl
	diisocyanate, oligomeric reaction products with, butane-1,3-di
	2,4'- diisocyanatodiphenylmethane,, 1,1'-methylenebis(4-
	isocyanatobenzene) homopolymer,,
	[(methylethylene)bis(oxy)]diprop anol and propane-1,2-diol,
	DIPHENYLMETHANE-2,4'-DI- ISOCYANATE, DIPHENYLMETHAN
	2,2'-DI-ISOCYANATE
Supplementary precautionary statements	P201 Obtain special instructions before use.
	P202 Do not handle until all safety precautions have been read
	and understood.
	P261 Avoid breathing vapour/ spray.
	P264 Wash contaminated skin thoroughly after handling.
	P271 Use only outdoors or in a well-ventilated area.
	P272 Contaminated work clothing should not be allowed out of
	the workplace.
	P284 [In case of inadequate ventilation] wear respiratory
	protection.
	P302+P352 IF ON SKIN: Wash with plenty of water.
	P304+P340 IF INHALED: Remove person to fresh air and keep
	comfortable for breathing.
	P312 Call a POISON CENTRE/doctor if you feel unwell.
	P314 Get medical advice/ attention if you feel unwell.
	P321 Specific treatment (see medical advice on this label).
	P332+P313 If skin irritation occurs: Get medical advice/
	attention.

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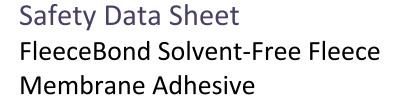




		P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
		P337+P313 If eye irritation persists: Get medical advice/ attention.
		P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
		P362+P364 Take off contaminated clothing and wash it before reuse.
		P403+P233 Store in a well-ventilated place. Keep container tightly closed.
		P405 Store locked up.
2.3	Other hazards	

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

2	<u>Mixtures</u>				
	DIPHENYLMETHANE-4,4'-				
	DI-ISOCYANATE	EC number: 202-966-0		ACH registration number: 01-	10-30%
	CAS number: 101-68-8		211	19457014-47	
	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				
		THYLENEDIPHENYL DIISOCYA	NATE		
				EC number: 00E 006 1	10.20%
	AND O-(P- ISOCYANATOBER	NZYL)PHENYL ISOCYANA I E		EC number: 905-806-4	10-30%
	AND O-(P- ISOCYANATOBEN	NZYLJPHENYL ISOCYANA I E		EC number: 905-806-4	10-30%
		NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: —	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification Acute Tox. 2 - H330	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification Acute Tox. 2 - H330 Skin Irrit. 2 - H315	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification Acute Tox. 2 - H330 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification Acute Tox. 2 - H330 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%
	CAS number: — Classification Acute Tox. 2 - H330 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317	NZYLJPHENYL ISOCYANA IE		EC number: 905-806-4	10-30%



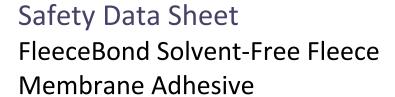


CAS 1 0045 07 0		5-10%
CAS number: 9016-87-9		
Classification		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Carc. 2 - H351		
STOT SE 3 - H335		
STOT RE 2 - H373		
4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS		
CAS number: -	EC number: 500-040-3	1-5%
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		
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction		
products with, butane-1,3-diol, 2,4'-	EC number: 500-313-7	1-5%
diisocyanatodiphenylmethane,, 1,1'-methylenebis(4-		
isocyanatobenzene) homopolymer,,		
[(methylethylene)bis(oxy)]diprop anol and propane-1,2-diol		
CAS number: -		
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		

### Safety Data Sheet FleeceBond Solvent-Free Fleece Membrane Adhesive



2,2'DIMORPHOLINYLDIETHYL ETHER		
	EC number: 229-194-7	<1%
CAS number: 6425-39-4		
Classification		
Eye Irrit. 2 - H319		
DIPHENYLMETHANE-2,4'-DI-ISOCYANATE		
,	EC number: 227-534-9	<1%
CAS number: 5873-54-1		
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		
	EC number: 219-799-4	<1%
	EC number: 219-799-4	<1%
CAS number: 2536-05-2	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification Acute Tox. 4 - H332	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334	EC number: 219-799-4	<1%
CAS number: 2536-05-2 Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317	EC number: 219-799-4	<1%
CAS number: 2536-05-2  Classification  Acute Tox. 4 - H332  Skin Irrit. 2 - H315  Eye Irrit. 2 - H319  Resp. Sens. 1 - H334  Skin Sens. 1 - H317  Carc. 2 - H351	EC number: 219-799-4	<1%
CAS number: 2536-05-2  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	EC number: 219-799-4	<1%
CAS number: 2536-05-2  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	EC number: 219-799-4	<1%
CAS number: 2536-05-2  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	EC number: 219-799-4  EC number: 202-710-8	<1%
CAS number: 2536-05-2  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  BENZOYL CHLORIDE		
CAS number: 2536-05-2  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  BENZOYL CHLORIDE  CAS number: 98-88-4		
CAS number: 2536-05-2  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  BENZOYL CHLORIDE  CAS number: 98-88-4  Classification		
CAS number: 2536-05-2  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  BENZOYL CHLORIDE  CAS number: 98-88-4  Classification  Acute Tox. 4 - H302		
CAS number: 2536-05-2  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  BENZOYL CHLORIDE  CAS number: 98-88-4  Classification  Acute Tox. 4 - H302  Acute Tox. 4 - H312		
CAS number: 2536-05-2  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  BENZOYL CHLORIDE  CAS number: 98-88-4 Classification Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1B - H314		





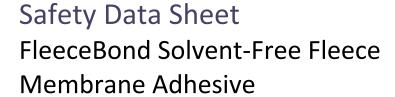
	EC number: 231-633-2	<1%
CAS number: 7664-38-2		
Classification		
Met. Corr. 1 - H290		
Acute Tox. 4 - H302		
Skin Corr. 1B - H314		

### **SECTION 4: FIRST AID MEASURES**

	Description of first aid measures	
4.1	General information	Remove affected person from source of contamination.
	Inhalation	Move affected person to fresh air at once. Get medical attention
		if any discomfort continues.
	Ingestion	DO NOT induce vomiting. Get medical attention immediately.
	Skin contact	Remove contaminated clothing immediately and wash skin with
		soap and water. Get medical attention if any discomfort continues.
	Eye contact	Rinse immediately with plenty of water. Remove any contact
		lenses and open eyelids wide apart. Continue to rinse for at least
		15 minutes. Get medical attention if irritation persists after
		washing. Show this Safety Data Sheet to the medical personnel.
4.2	Most important symptoms and effects, both ac	ute and delayed
	General information	The severity of the symptoms described will vary dependent on
		the concentration and the length of exposure.
	Inhalation	Irritation of nose, throat and airway. Coughing, chest tightness,
		feeling of chest pressure.
	Ingestion	May cause discomfort if swallowed.
	Skin contact	Prolonged skin contact may cause redness and irritation.
	Eye contact	Severe irritation, burning and tearing.
4.3	Indication of any immediate medical attention	and special treatment needed
4.5	Notes for the doctor	
	Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
		promptify.

### **SECTION 5: FIREFIGHTING MEASURES**

5.1	Extinguishing media	
	Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
	Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the
		fire.
5.2	Special hazards arising from the substance or mixture	
	Specific hazards	The product is non-combustible. Irritating gases or vapours.
	Hazardous combustion products	Thermal decomposition or combustion may liberate carbon
		oxides and other toxic gases or vapours. Oxides of carbon.





		Oxides of carbon. Oxides of nitrogen.
5.3	Advice for firefighters	
	Protective actions during firefighting	Containers close to fire should be removed or cooled with water.  Do not allow water to contact any leaked material.
	Special protective equipment for firefighters	Wear chemical protective suit. Wear positive-pressure self- contained breathing apparatus (SCBA) and appropriate protective clothing.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

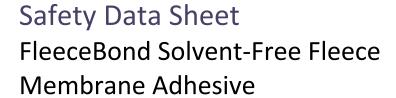
6.1	Personal precautions, protective equipment and emergency procedures		
	Personal precautions	Wear protective clothing as described in Section 8 of this safety	
		data sheet.	
6.2	Environmental precautions		
	Environmental precautions	Do not discharge into drains or watercourses or onto the ground.	
6.3	Methods and material for containment and cleaning up		
	Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Absorb spillage with non- combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.	
6.4	Reference to other sections		
	Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.	

### **SECTION 7: HANDLING AND STORAGE**

7.1	Precautions for safe handling		
	Usage precautions	Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.	
7.2	Conditions for safe storage, including any incompatibilities		
	Storage precautions	Store in closed original container at temperatures between 5°C and 25°C.	
	Storage class	Chemical 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**

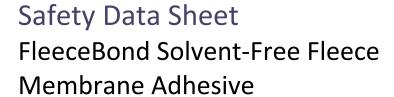
8.1	Control parameters	





Occupational exposure limits	
	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Long-term exposure limit (8-hour TW	A): WFL 0.02 mg/m3(Sen)
Short-term exposure limit (15-minute	<u> </u>
( <u>-</u> 2	,, , , , , , , , , , , , , , , , , , ,
	diphenylmethane-diisocyanate, isomers and homologues
Long-term exposure limit (8-hour TW	A): WEL 0.02 mg/m <sup>3</sup>
Short-term exposure limit (15-minute	
4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS	
Short-term exposure limit (15-minute	e): WEL 0.07 mg/m³
Long-term exposure limit (8-hour TW	· — — — — — — — — — — — — — — — — — — —
·	
DIPHENYLMETHANE-2,4'-DI- ISOCYANATE	
Long-term exposure limit (8-hour TW	A): WEL 0.02 mg/m3(Sen)
Short-term exposure limit (15-minute	·
·	, ,
DIPHENYLMETHANE-2,2'-DI- ISOCYANATE	
Long-term exposure limit (8-hour TW	A): WEL 0.02 mg/m3(Sen)
Short-term exposure limit (15-minute	, , ,
·	
Orthophosphoric acid 85%	
Long-term exposure limit (8-hour TW	A): WEL 1 mg/m³
Short-term exposure limit (15-minute	
WEL = Workplace Exposure Limit.	
Ingredient comments	WEL = Workplace Exposure Limits
	<u>DIPHENYLMETHANE-4,4'-DI-ISOCYANATE</u> (CAS: 101-68-8)
DNEL	Workers - Inhalation; Short term systemic effects: 0.1 mg/m <sup>3</sup>

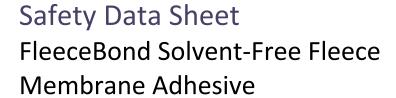
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	Workers - Inhalation; Long term systemic effects: 0.05 mg/m³ Workers - Inhalation; Long term local effects: 0.05 mg/m³ General population - Dermal; Short term systemic effects: 25 mg/kg General population -
DNEL	Workers - Dermal; Short term systemic effects: 50 mg/kg Workers - Inhalation; Short term systemic effects: 0.1 mg/m³ Workers - Dermal; Short term local effects: 28.7 mg/cm² Workers - Inhalation; Short term local effects: 0.1 mg/m³
Ingredient comments	WEL = Workplace Exposure Limits
	diphenylmethane-diisocyanate, isomers and homologues (CAS: 9016-87-9)
	- Soil; 1 mg/kg - STP; 1 mg/l
PNEC	- Fresh water; 1 mg/l - marine water; 0.1 mg/l
DNEC	Fresh water, 1 mg/l
	term local effects: 17.2 mg/cm <sup>2</sup> Consumer - Inhalation; Short term local effects: 0.05 mg/m <sup>3</sup> Consumer - Inhalation; Long term systemic effects: 0.025 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 0.025 mg/m <sup>3</sup>
	Short term systemic effects: 0.05 mg/m <sup>3</sup> Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short
	Workers - Inhalation; Long term local effects: 0.05 mg/m³ Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Consumer - Inhalation;
	Workers - Inhalation; Long term systemic effects: 0.05 mg/m³
	Workers - Dermal; Short term local effects: 28.7 mg/cm <sup>2</sup> Workers - Inhalation; Short term local effects: 0.1 mg/m <sup>3</sup>
DNEL	Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Workers - Inhalation; Short term systemic effects: 0.1 mg/m³
	ISOCYANATOBENZYL)PHENYL ISOCYANATE
	REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANATE AND O-(P-
	- Soil; 1 mg/kg
	- Fresh water; 1 mg/l
PNEC	- marine water; 0.1 mg/l - STP; 1 mg/l
	Consumer - Inhalation; Short term systemic effects: 0.05 mg/m³
	Long term local effects: 0.025 mg/m <sup>3</sup>
	Consumer - Inhalation; Short term local effects: 0.05 mg/m <sup>3</sup> Consumer - Inhalation; Long term systemic effects: 0.025 mg/m <sup>3</sup> Consumer - Inhalation;
	effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm²
	Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic
	Workers - Inhalation; Long term local effects: 0.05 mg/m³
	Workers - Inhalation; Long term systemic effects: 0.05 mg/m³
	Workers - Inhalation; Short term local effects: 0.1 mg/m <sup>3</sup>

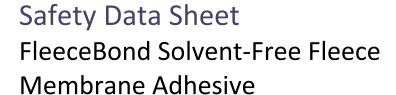
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	Workers - Dermal; Short term local effects: 28.7 mg/cm² Workers - Inhalation; Short term local effects: 0.1 mg/m³ Workers - Inhalation; Long term systemic effects: 0.05 mg/m³ Workers - Inhalation; Long term local effects: 0.05 mg/m³ Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm² Consumer - Inhalation; Short term local effects: 0.05 mg/m³ Consumer - Inhalation; Long term systemic effects: 0.025 mg/m³ Consumer - Inhalation; Long term local effects: 0.025 mg/m³
DNEL	4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS  Workers - Inhalation; Short term systemic effects: 0.1 mg/m³
PNEC	- marine water; 0.1 mg/l - STP; 1 mg/l - Fresh water; 1 mg/l - Soil; 1 mg/kg
DNEL	Workers - Inhalation; Short term systemic effects: 0.1 mg/m³ Workers - Dermal; Short term local effects: 28.7 mg/cm² Workers - Inhalation; Short term local effects: 0.1 mg/m³ Workers - Inhalation; Long term systemic effects: 0.05 mg/m³ Workers - Inhalation; Long term local effects: 0.05 mg/m³ Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm² Consumer - Inhalation; Short term local effects: 0.05 mg/m³ Consumer - Inhalation; Long term systemic effects: 0.025 mg/m³ Consumer - Inhalation; Long term systemic effects: 0.05 mg/m³ Consumer - Inhalation; Short term systemic effects: 0.05 mg/m³
	4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with, butane- 1,3-diol, 2,4'- diisocyanatodiphenylmethane,, 1,1'-methylenebis(4- isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy)]diprop anol and propane-1,2-diol
PNEC	- Fresh water; 1 mg/l - marine water; 0.1 mg/l - Soil; 1 mg/kg dry weight - STP; 1 mg/l
	Inhalation; Short term systemic effects: 0.05 mg/m³ General population - Oral; Short term systemic effects: 20 mg/kg General population - Dermal; Short term local effects: 17.2 mg/cm² General population - Inhalation; Short term local effects: 0.05 mg/m³ General population Inhalation; Long term systemic effects: 0.025 mg/m³ General population - Inhalation; Long term local effects: 0.025 mg/m³

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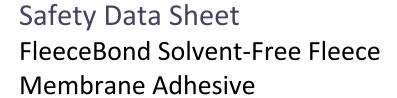




	PNEC	- marine water; 0.1 mg/l	
		- STP; 1 mg/l	
		- Fresh water; 1 mg/l	
		- Soil; 1 mg/kg	
		2,2'DIMORPHOLINYLDIETHYL ETHER (CAS: 6425-39-4)	
	DNEL	Workers - Inhalation; Long term systemic effects: 7.28 mg/m³	
		Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day	
		Consumer - Inhalation; Long term systemic effects: 1.8 mg/m³	0 1 1
		Consumer - Dermal; Long term systemic effects: 0.5 mg/kg bw/day Consum term systemic effects: 0.5 mg/kg bw/day	er - Oral; Lon
	PNEC	- Fresh water; 0.1 mg/l	
		- marine water; 0.01 mg/l	
		- Intermittent release; 1 mg/l	
		- Sediment (Freshwater); 8.2 mg/kg	
		- Sediment (Marinewater); 0.82 mg/kg	
		- STP; 100 mg/l	
		- Soil; 1.58 mg/kg	
2	Exposure controls		
	<u> </u>		
	Protective equipment		
	Protective equipment		
	Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours. Observe any exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or other products of the product o	ingredients her
		exposure limits for the product or ingredients. As this product contains	ingredients her
		exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or ot engineering controls should be used to keep worker exposure below an	ingredients her
	Appropriate engineering controls	exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or ot engineering controls should be used to keep worker exposure below an recommended limits, if use generates dust, fumes, gas, vapour or mist.	ingredients her y statutory o le rubber. It s are
	Appropriate engineering controls  Eye/face protection	exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or othengineering controls should be used to keep worker exposure below an recommended limits, if use generates dust, fumes, gas, vapour or mist. Wear chemical splash goggles.  It is recommended that gloves are made of the following material: Nitril should be noted that liquid may penetrate the gloves. Frequent changes recommended. For exposure up to 8 hours, wear gloves made of the following material.	ingredients her y statutory o le rubber. It s are llowing
	Appropriate engineering controls  Eye/face protection  Hand protection	exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below an recommended limits, if use generates dust, fumes, gas, vapour or mist.  Wear chemical splash goggles.  It is recommended that gloves are made of the following material: Nitril should be noted that liquid may penetrate the gloves. Frequent changes recommended. For exposure up to 8 hours, wear gloves made of the following: Nitrile rubber.  Wear suitable protective clothing as protection against splashing or con	ingredients her y statutory of le rubber. It s are llowing tamination.
	Appropriate engineering controls  Eye/face protection  Hand protection  Other skin and body protection	exposure limits for the product or ingredients. As this product contains with exposure limits, process enclosures, local exhaust ventilation or othengineering controls should be used to keep worker exposure below an recommended limits, if use generates dust, fumes, gas, vapour or mist. Wear chemical splash goggles.  It is recommended that gloves are made of the following material: Nitril should be noted that liquid may penetrate the gloves. Frequent changes recommended. For exposure up to 8 hours, wear gloves made of the following: Nitrile rubber.  Wear suitable protective clothing as protection against splashing or con Wear apron or protective clothing in case of contact.  Use engineering controls to reduce air contamination to permissible expenses.	ingredients her y statutory of le rubber. It s are llowing tamination. posure level. in. Wear a

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES** 

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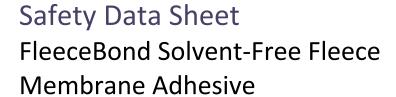


9.1	Information on basic physical and chemical properties	
	Appearance	Coloured liquid.
	Colour	Various colours
	Odour	Musty (mouldy).
	Odour threshold	Not available.
	рН	Estimated value. pH (concentrated solution): 7-8
	Melting point	<10°C
	Initial boiling point and range	330°C @ mbar.
	Flash point	>200°C Closed cup.
	Evaporation rate	slow.
	Evaporation factor	Not available.
	Flammability (solid, gas)	Not available.
	Upper/lower flammability or explosive limits	Estimated value.: 0.6% - 11.5%
	Other flammability	Not available.
	Vapour pressure	0.01 Pa @ °C.
	Vapour density	8.5.
	Relative density	1.12
	Bulk density	Not available.
	Solubility(ies)	Insoluble in water. Hardens in contact with water.
	Partition coefficient	Not available.
	Auto-ignition temperature	>600°C
	Decomposition Temperature	Not available.
	Viscosity	90-130 mPa s @ 25°C.
	Explosive properties	Not available.
	Explosive under the influence of a flame	Not considered to be explosive.
	Oxidising properties	Not available.
	Comments	Information given is applicable to the product as supplied.
9.2	Other information	
	Other information	No information required.
	Refractive index	Not available.
	Particle size	Not available.
	Molecular weight	Not available.
	Volatility	Not available.
	Saturation concentration	Not available.
	Critical temperature	Not available.
	Volatile organic compound	No information available.

### **SECTION 10: STABILITY AND REACTIVITY**

10.1	Reactivity	
	Reactivity	The product will harden into a solid mass in contact with water and moisture.
10.2	Chemical stability	
	Stability	Stable at normal ambient temperatures and when used as recommended.

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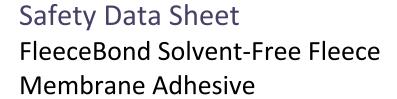


10.3	Possibility of hazardous reactions	
	Possibility of hazardous reactions	Not applicable. May polymerise.
10.4	Conditions to avoid	
10.4	Conditions to avoid	Avoid contact with water.
10.5	Incompatible materials	
10.6	Hazardous decomposition products	
	Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of carbon. Oxides of nitrogen.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

l.1	Information on toxicological effects	
	Acute toxicity - oral	
	Acute toxicity – oral (LD <sub>50</sub> mg/kg)	10,000.0
	Species	Rat
	Acute toxicity - dermal	
	Acute toxicity dermal (LD <sub>50</sub> mg/kg)	10,000.0
	Species	Rabbit
	Acute toxicity - inhalation	
	ATE inhalation (gases ppm)	391,304.35
	ATE inhalation (vapours mg/l)	956.52
	ATE inhalation (dusts/mists mg/l)	2.76
	Skin corrosion/irritation	
	Animal data	Irritating.
	Serious eye damage/irritation	
	Serious eye damage/irritation	Moderately irritating.
	Respiratory sensitisation	
	Respiratory sensitisation	Sensitising.
	Carcinogenicity	
	Carcinogenicity	Suspected carcinogen based on limited evidence.
	Target organ for carcinogenicity	No specific target organs known.
	Reproductive toxicity	
	Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
	Specific target organ toxicity - repeated exposure	
	STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

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Aspiration hazard	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on cher structure.
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains quantities of isocyanate. May cause respiratory allergy. May carespiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respirator allergy.
Route of exposure	Inhalation Skin and/or eye contact.
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.
Aputo tovicitu, que!	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	10,000.0
Species	Rat
ATE oral (mg/kg)	10,000.0
Acute toxicity - dermal	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	9,400.0
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species	Rabbit
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species ATE dermal (mg/kg)	
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species ATE dermal (mg/kg) Acute toxicity - inhalation	Rabbit 9,400.0
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species ATE dermal (mg/kg)  Acute toxicity - inhalation Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)	Rabbit 9,400.0 1.5
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species	Rabbit 9,400.0 1.5 Rat
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)	Rabbit 9,400.0 1.5
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species ATE dermal (mg/kg)  Acute toxicity - inhalation Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l) Species ATE inhalation (dusts/mists mg/l)  Carcinogenicity	Rabbit 9,400.0 1.5 Rat 1.5
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)	Rabbit 9,400.0 1.5 Rat
Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species ATE dermal (mg/kg)  Acute toxicity - inhalation Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l) Species ATE inhalation (dusts/mists mg/l)  Carcinogenicity	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)  Carcinogenicity  IARC carcinogenicity	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)  Carcinogenicity  IARC carcinogenicity  Acute toxicity - dermal	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human  REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANATE  O-(P- ISOCYANATOBENZYL)PHENYL ISOCYANATE
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)  Carcinogenicity  IARC carcinogenicity  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human  REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANATE  0-(P- ISOCYANATOBENZYL)PHENYL ISOCYANATE  9,400.0
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)  Carcinogenicity  IARC carcinogenicity  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human  REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANATE  0-(P- ISOCYANATOBENZYL)PHENYL ISOCYANATE  9,400.0
Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  ATE dermal (mg/kg)  Acute toxicity - inhalation  Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)  Species  ATE inhalation (dusts/mists mg/l)  Carcinogenicity  IARC carcinogenicity  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Acute toxicity - inhalation	Rabbit 9,400.0  1.5 Rat 1.5 IARC Group 3 Not classifiable as to its carcinogenicity to human  REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANAT O-(P- ISOCYANATOBENZYL)PHENYL ISOCYANATE  9,400.0 Rabbit

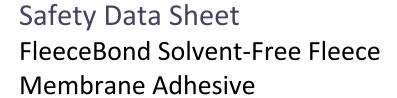
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### Safety Data Sheet FleeceBond Solvent-Free Fleece Membrane Adhesive



Acute toxicity - oral		
Acute toxicity oral (LD <sub>50</sub> mg/kg)	10,000.0	
Species	Rat	
ATE oral (mg/kg)	10,000.0	
Acute toxicity - dermal		
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	9,400.0	
Species	Rabbit	
ATE dermal (mg/kg)	9,400.0	
Acute toxicity - inhalation		
Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)	1.5	
Species	Rat	
ATE inhalation (dusts/mists mg/l)	1.5	
Skin corrosion/irritation		
Animal data	Irritating.	
Serious eye damage/irritation		
Serious eye damage/irritation	Moderately irritating.	
Respiratory sensitisation		
Respiratory sensitisation	Sensitising.	
Carcinogenicity		
Carcinogenicity	Suspected carcinogen based on limited evidence.	
Target organ for carcinogenicity	No specific target organs known.	
Reproductive toxicity		
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.	
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.	
Specific target organ toxicity - repeated exposure		
STOT - repeated exposure	Morphological changes that are potentially reversible be clear evidence of marked organ dysfunction.	ut provide
Aspiration hazard		
Aspiration hazard	Not anticipated to present an aspiration hazard, based structure.	on chemica
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.	
Ingestion	May cause stomach pain or vomiting.	
Skin contact	Irritating to skin. May cause sensitisation by skin contact	ct.
Eye contact	Irritation of eyes and mucous membranes.	
Acute and chronic health hazards	May cause sensitisation by skin contact. The product co	ntains sma
	quantities of isocyanate. May cause respiratory allergy.	
	respiratory system irritation. May cause respiratory sys	•
	irritation. Frequent inhalation of vapours may cause res	

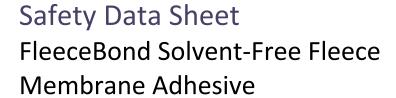
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	allergy.
Route of exposure	Inhalation Skin and/or eye contact.
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest
	tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.
	4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0
Acute toxicity - dermal	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	9,400.0
Species	Rabbit
ATE dermal (mg/kg)	9,400.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC <sub>50</sub> dust/mist mg/l)	1.5
Species	Rat
ATE inhalation (dusts/mists mg/l)	1.5
	2,2'DIMORPHOLINYLDIETHYL ETHER
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	2 035 0
Acute toxicity oral (LD <sub>50</sub> mg/kg)	2,035.0 Rat
Species	Rat
Species Notes (oral LD <sub>50</sub> )	Rat No information available.
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)	Rat
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg) Acute toxicity - dermal	Rat No information available. 2,035.0
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)  Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg)	Rat No information available. 2,035.0 3,038.0
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)  Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species	Rat No information available. 2,035.0 3,038.0 Rabbit
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)  Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species Notes (dermal LD <sub>50</sub> )	Rat No information available. 2,035.0 3,038.0
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)  Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)  Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation Notes (inhalation LC <sub>50</sub> )	Rat No information available. 2,035.0 3,038.0 Rabbit
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg) Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species Notes (dermal LD <sub>50</sub> ) Acute toxicity - inhalation Notes (inhalation LC <sub>50</sub> ) Skin corrosion/irritation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.
Species Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg) Acute toxicity - dermal Acute toxicity dermal (LD <sub>50</sub> mg/kg) Species Notes (dermal LD <sub>50</sub> ) Acute toxicity - inhalation Notes (inhalation LC <sub>50</sub> ) Skin corrosion/irritation Skin corrosion/irritation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation  Respiratory sensitisation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation  Respiratory sensitisation  Respiratory sensitisation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation  Respiratory sensitisation  Respiratory sensitisation  Skin sensitisation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.  No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation  Respiratory sensitisation  Respiratory sensitisation  Skin sensitisation  Skin sensitisation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.  No information available.
Species  Notes (oral LD <sub>50</sub> )  ATE oral (mg/kg)  Acute toxicity - dermal  Acute toxicity dermal (LD <sub>50</sub> mg/kg)  Species  Notes (dermal LD <sub>50</sub> )  Acute toxicity - inhalation  Notes (inhalation LC <sub>50</sub> )  Skin corrosion/irritation  Skin corrosion/irritation  Serious eye damage/irritation  Serious eye damage/irritation  Respiratory sensitisation  Respiratory sensitisation  Skin sensitisation	Rat No information available. 2,035.0  3,038.0 Rabbit No information available.  No information available.  No information available.  No information available.  No information available.

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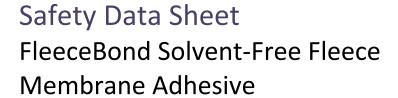


Ingestion	May be harmful if swallowed.
Skin contact	May be absorbed through the skin. May be harmful in contact with
	skin. May cause skin irritation.
Eye contact	May cause eye irritation.
	BENZOYL CHLORIDE
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	1,900.0
Species	Rat
ATE oral (mg/kg)	1,900.0
Acute toxicity - dermal	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	790
Species	Rat
ATE dermal (mg/kg)	1,100.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC <sub>50</sub> vapours mg/l)	1.45
Species	Rat
ATE inhalation (vapours mg/l)	11.0
<u>Carcinogenicity</u>	
IARC carcinogenicity	IARC Group 2A Probably carcinogenic to humans.
Inhalation	May be harmful if inhaled. Spray/mists may cause respiratory tract irritation.
	Orthophosphoric acid 85%
Acute toxicity - oral	
Acute toxicity oral (LD <sub>50</sub> mg/kg)	1,530.0
Species	Rat
ATE oral (mg/kg)	1,530.0
Acute toxicity - dermal	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	2,740.0
Species	Rabbit
ATE dermal (mg/kg)	2,740.0

### **SECTION 12: ECOLOGICAL INFORMATION**

Ecoto	kicity	The product is not expected to be hazardous to the environment.
Ecolog	cical information on ingredients.	
		diphenylmethane-diisocyanate, isomers and homologues
	Ecotoxicity	The product is not expected to be hazardous to the environment.
12.1	<u>Toxicity</u>	
	Acute aquatic toxicity	
	Acute toxicity - fish	LC50, 96 hours: > 1000 mg/l, Freshwater fish
	Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours: >500 mg/l, Daphnia magna
	Acute toxicity - aquatic plants	EC <sub>50</sub> , 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

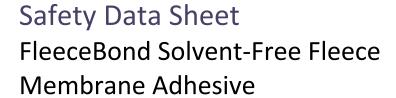
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ical information on ingredients.		
	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	
Acute aquatic toxicity		
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: >1000 mg/l, Marinewater fish	
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 24 hours: >1000 mg/l, Daphnia magna	
Chronic aquatic toxicity		
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: >10 mg/l, Daphnia magna	
	REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYAN	ATE AND
	ISOCYANATOBENZYL)PHENYL ISOCYANATE	
Acute aquatic toxicity		
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: >1000 mg/l, Fish	
Acute toxicity - aquatic invertebrates	C <sub>50</sub> , 24 hours: >1000 mg/l, Daphnia magna	
	NOEC, 21 days: 10 mg/l, Daphnia magna	
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: >100 mg/l, Activated sludge	
	diphenylmethane-diisocyanate, isomers and homo	ologues
Acute aquatic toxicity		
Acute toxicity - fish	LC50, 96 hours: > 1000 mg/l, Freshwater fish	
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours: >500 mg/l, Daphnia magna	
Acute toxicity - aquatic plants	EC <sub>50</sub> , 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus	
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: 100 mg/l, Activated sludge	
Chronic aquatic toxicity		
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 10 mg/l, Daphnia magna	
	4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGO	MERS
Acute aquatic toxicity		
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: 1000 mg/l, Fish	
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 24 hours: 1000 mg/l, Daphnia magna	
Acute toxicity - aquatic plants	EC <sub>50</sub> , 72 hours: 1640 mg/l, Algae	
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: 100 mg/l, Bacteria	
Chronic aquatic toxicity		
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 10 mg/l, Daphnia magna	
	4,4'-Methylenediphenyl diisocyanate, oligomeric reaction butane-1,3-diol, 2,4'- diisocyanatodiphenylmethane,, 1,1'-r isocyanatobenzene) homopolymer,, [(methylethylene)bis(contact) and propers 1,2 diel	nethylen
	and propane-1,2-diol	
Acute aquatic toxicity		

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Acute toxicity - fish	LC <sub>EO</sub> , 96 hours: >1000 mg/l, Fish	
	G	
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: >100 mg/l, Activated sludge	
Chronic aquatic toxicity		
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: >10 mg/l, Daphnia magna	
	2,2'DIMORPHOLINYLDIETHYL ETHER	
Acute aquatic toxicity		
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: 2150 mg/l,	
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: >1000 mg/l, Bacteria	
	BENZOYL CHLORIDE	
Acute aquatic toxicity		
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: 8.7 mg/l, Fish	
Acute toxicity - aquatic invertebrates	Not available.	
Acute toxicity - aquatic plants	Not available.	
Acute toxicity - microorganisms	Not available.	
Acute toxicity - terrestrial	Not available.	
	Orthophosphoric acid 85%	
Acute aquatic toxicity		
Acute toxicity - fish	No information available.	
Acute toxicity - aquatic invertebrates	Not available.	
Acute toxicity - aquatic plants	Not available.	
Acute toxicity - microorganisms	Not available.	
Acute toxicity - terrestrial	Not available.	
Persistence and degradability		
Persistence and degradability	The product is not readily biodegradable.	
Stability (hydrolysis)	Reacts with water.	
Biological oxygen demand	< 10 g O <sub>2</sub> /g substance	
Bioaccumulative potential		
Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.	
Partition coefficient	Not available.	
<b>Ecological information on ingredients</b>		
	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	
	Chronic aquatic toxicity Chronic toxicity - aquatic invertebrates  Acute aquatic toxicity Acute toxicity - fish Acute toxicity - aquatic invertebrates Acute toxicity - microorganisms  Acute aquatic toxicity Acute toxicity - aquatic invertebrates Acute toxicity - aquatic invertebrates Acute toxicity - aquatic plants Acute toxicity - microorganisms Acute toxicity - terrestrial  Acute aquatic toxicity Acute toxicity - terrestrial  Acute toxicity - aquatic invertebrates Acute toxicity - aquatic plants Acute toxicity - aquatic plants Acute toxicity - aquatic plants Acute toxicity - microorganisms Acute toxicity - terrestrial  Persistence and degradability Persistence and degradability Persistence and degradability Stability (hydrolysis) Biological oxygen demand  Bioaccumulative potential Bioaccumulative potential  Partition coefficient	Acute toxicity - aquatic invertebrates  Acute toxicity - aquatic plants  EC <sub>50</sub> , 72 hours: >1640 mg/l, Algae  Chronic aquatic toxicity  Chronic aquatic toxicity  Chronic toxicity - aquatic invertebrates  NOEC, 21 days: >10 mg/l, Daphnia magna  2.2'DIMORPHOLINYLDIETHYL ETHER  Acute aquatic toxicity  Acute toxicity - fish  LC <sub>50</sub> , 96 hours: 2150 mg/l,  Acute toxicity - aquatic invertebrates  EC <sub>50</sub> , 48 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 72 hours: >100 mg/l, Daphnia magna  Acute toxicity - fish  LC <sub>50</sub> , 96 hours: 2150 mg/l,  Acute toxicity - aquatic invertebrates  EC <sub>50</sub> , 72 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 73 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 74 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 74 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 75 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 75 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 75 hours: >100 mg/l, Daphnia magna  EC <sub>50</sub> , 76 hours: >100 mg/l, Pseudokirchneriella subcapitata  EC <sub>50</sub> , 78 hours: >100 mg/l, Bacteria  BENZOYL CHLORIDE  Acute toxicity - aquatic invertebrates  Acute toxicity - aquatic invertebrates  Not available.  Acute toxicity - aquatic invertebrates  Not available

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		REACTION MASS OF 4'4 METHYLENEDIPHENYL DIISOCYANAT	E AND O-(P-
		ISOCYANATOBENZYL)PHENYL ISOCYANATE	
	Bioaccumulative potential	log Pow: 4.51, BCF: 200,	
		diphenylmethane-diisocyanate, isomers and homolog	gues
	Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating	
	Partition coefficient	Not available.	
		4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOME	ERS
	Bioaccumulative potential	BCF: 200,	
	Partition coefficient	log Pow: 856	
		4,4'-Methylenediphenyl diisocyanate, oligomeric reaction pro	
		butane-1,3-diol, 2,4'- diisocyanatodiphenylmethane,, 1,1'-met isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol	
	Bioaccumulative potential	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy	
	Bioaccumulative potential Partition coefficient	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol	
12.4	Partition coefficient	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200,	
12.4	-	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200,	
12.4	Partition coefficient  Mobility in soil	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17	
12.4	Partition coefficient  Mobility in soil  Mobility	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17	)]diprop and
12.4	Partition coefficient  Mobility in soil  Mobility	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.	)]diprop and
	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients  Mobility  Mobility	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog	)]diprop and
	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog  The product is non-volatile.	)]diprop and
12.4	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients  Mobility  Mobility  Results of PBT and vPvB assessment	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog	)]diprop and
	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients  Mobility  Mobility  Results of PBT and vPvB assessment  Results of PBT and vPvB assessment	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog  The product is non-volatile.	gues or vPvB.
	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients  Mobility  Mobility  Results of PBT and vPvB assessment  Results of PBT and vPvB assessment	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog  The product is non-volatile.  This product does not contain any substances classified as PBT of	gues or vPvB.
	Partition coefficient  Mobility in soil  Mobility  Ecological information on ingredients  Mobility  Results of PBT and vPvB assessment  Results of PBT and vPvB assessment  Ecological information on ingredients	isocyanatobenzene) homopolymer,, [(methylethylene)bis(oxy and propane-1,2-diol  BCF: 200, log Pow: 6.17  The product is non-volatile.  diphenylmethane-diisocyanate, isomers and homolog  The product is non-volatile.  This product does not contain any substances classified as PBT of the diphenylmethane-diisocyanate, isomers and homolog	gues or vPvB.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1	Waste treatment methods		
	General information	Waste should be treated as controlled waste. Dispose of waste waste disposal site in accordance with the requirements of the	
		Disposal Authority.	local waste

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Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the
	requirements of the local Waste Disposal Authority.

### **SECTION 14: TRANSPORT INFORMATION**

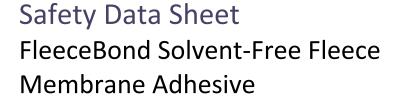
	General	Wear protective clothing as described in Section 8 of this safety
		data sheet.
14.1	<u>UN number</u>	
	Not applicable.	
14.2	UN proper shipping name	
	Not applicable.	
14.3	Transport hazard class(es)	
	No transport warning sign required.	
	Transport labels	
	No transport warning sign required.	
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	Not applicable.

### **SECTION 15: REGULATORY INFORMATION**

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	National regulations	Health and Safety at Work etc. Act 1974 (as amended).
	Restrictions (SI 2020 No. 1577 Annex XVII)	As from 24 August 2023 adequate training is required before industrial or professional use Entry number: 74
15.2	Chemical safety assessment	No chemical safety assessment has been carried out.

### **SECTION 16: OTHER INFORMATION**

Issued by	Compliance	
Revision date	25/10/2022	
Revision	22	





Supersedes date	12/10/2021
Hazard statements in full	H290 May be corrosive to metals.
	H302 Harmful if swallowed.
	H312 Harmful in contact with skin.
	H314 Causes severe skin burns and eye damage.
	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H319 Causes serious eye irritation.
	H330 Fatal if inhaled
	H332 Harmful if inhaled.
	H334 May cause allergy or asthma symptoms or breathing
	difficulties if inhaled.
	H335 May cause respiratory irritation.
	H351 Suspected of causing cancer.
	H373 May cause damage to organs through prolonged or
	repeated exposure.
Store Between	Store Between 5°C-25°C
ct undate date (Manufacturer)	25 /10/2022 /Pay 22\
st update date (Manufacturer)	25/10/2022 (Rev 22)
oy Materials Ltd version prepared by	Martin Bidewell (28/02/2023 v1)

The data contained in this document is correct on date of issue and complete to the best of our knowledge as it applies to this product. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship. The information given does not represent an assurance and it is the user's responsibility to ensure that the information is suitable and complete for the respective use.

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