MATERIAL SAFETY DATA SHEET

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: Aquabond Aquafix Adhesive
Unique Formula Identifier: UFI 7500-W011-T00S-Q7WX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: **PC1** Adhesive.

1.3. Details of the supplier of the safety data sheet

Company name: EnviroStik Holdings (UK) Ltd,
Unit 7 & 8, Opal Way,
Stone Business Park,
Stone,
Staffordshire,
ST15 0SS
Tel: (01889) 271751
Email: salessupport@envirostik.com

1.4. Emergency telephone number

Emergency tel: (01889) 271751 (Monday to Friday 9am – 5pm)

No nanoforms are used.

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Skin Irrit. 2; H315
Skin Sens. 1; H317
Eye Irrit. 2; H319
Acute Tox. 4; H332
Resp. Sens. 1; H334
STOT SE 3; H335
Carc. 2; H351
STOT RE 2; H373
Aquatic Chronic 3; H412

Physicochemical Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers.

2.2. Label elements

Pictogram

Signal word Danger

Hazard statements H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
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.
H412 Harmful to aquatic life with long lasting effects

Precautionary statements
EUH204 Contains isocyanates. May produce an allergic reaction.
P260 Do not breathe vapour/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P284 [In case of inadequate ventilation] wear respiratory protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with national regulations.
RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
RCH004c This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Contains DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

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.
P273: Avoid release to the environment
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.
P313 Get medical advice/attention.
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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 If eye irritation persists: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362 Take off contaminated clothing.
P363 Wash contaminated clothing before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB or any endocrine disruptors.

Section 3: Composition/information on ingredients

3.2. Mixtures

Substance	Percentage	CAS Number	EC Number	Hazard classification	SCLs/M-Factor/ATE
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[isocyanatobenzene] (90%)	<50%	112898-48-3	670-235-7	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 STOT RE 2; H373	**LC50** Inhal: 11 mg/l (Converted ATE)
4,4'-methylenediphenyl diisocyanate (24.99%)	<20%	101-68-8	202-966-0	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc, 2; H351 STOT RE 2; H373	**SCLs** Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0,1 % STOT SE 3; H335: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % **LC50** Inhal: 11 mg/l (Converted ATE)
o-(p-isocyanatobenzyl)phenyl isocyanate (4.99%)	<5%	5873-54-1	227-534-9	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc, 2; H351 STOT RE 2; H373	**SCLs** Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0,1 % STOT SE 3; H335: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % **LC50** Inhal: 11 mg/l (Converted ATE)

Isocyanic acid, polymethylenepolyphenylene ester (90%)	<10%	9016-87-9	618-498-9	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc, 2; H351 STOT RE 2; H373	**LC50** Inhal: 11 mg/l (Converted ATE)
A mixture of: 3,5-dimethylthio-2,4-toluenediamine; 3,5-dimethylthio-2,6-toluenediamine (100%)	<1%	106264-79-3	403-240-8	Acute Tox. 4; H302 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	**LD50** Oral: 1515 mg/kg bw

The Full Text for all Hazard Statements are Displayed in Section 16.

Section 4: First aid measures

4.1. Description of first aid measures

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.

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 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

Notes for the doctor: No specific recommendations. If in doubt, get medical attention promptly.

Specific treatments: Treat symptomatically.

Section 5: Fire-fighting 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. Not known.

Hazardous combustion products:

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for fire-fighters

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: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental Precautions: Contain the spillage using bunding. Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean up Procedures: 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: Refer to section 8 of SDS for personal protection details.

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.

Advice on general occupational hygiene:

Wash promptly with soap and water if skin becomes contaminated. Preventive industrial medical examinations should be carried out.

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.
Incompatibilities: Strong oxidising agents.

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

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Long-term exposure limit (8-hour TWA): WEL 0.07 mg/m^3
Short-term exposure limit (15-minute): WEL 0.02 mg/m^3

Ingredient comments WEL = Workplace Exposure Limits

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES) (CAS: 32055-14-4)

Ingredient comments WEL = Workplace Exposure Limits

DNEL
Workers - Dermal; Short term systemic effects: 50 mg/kg
Workers - Inhalation; Short term systemic effects: 0.1 mg/m^3
Workers - Dermal; Short term local effects: 28.7 mg/cm^2
Workers - Inhalation; Short term local effects: 0.1 mg/m^3
Workers - Inhalation; Long term systemic effects: 0.05 mg/m^3
Workers - Inhalation; Long term local effects: 0.05 mg/m^3
General population - Dermal; Short term systemic effects: 25 mg/kg
General population - Inhalation; Short term systemic effects: 0.05 mg/m^3
General population - Oral; Short term systemic effects: 20 mg/kg
General population - Dermal; Short term local effects: 17.2 mg/cm^2
General population - Inhalation; Short term local effects: 0.05 mg/m^3
General population - Inhalation; Long term systemic effects: 0.025 mg/m^3
General population - Inhalation; Long term local effects: 0.025 mg/m^3

PNEC
Fresh water; 1 mg/l
Marine water; 0.1 mg/l
Soil; 1 mg/kg dry weight
STP; 1 mg/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls:

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection: Wear chemical splash goggles.

Hand protection:

It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Neoprene.

Other skin and body protection: Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures: Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.

Respiratory protection: If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.

Thermal hazards: Not relevant

Environmental exposure controls:

Keep container tightly sealed when not in use.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical State:	Liquid
(b) Colour:	Green
(c) Odour:	Characteristic
(d) Melting Point/Freezing point:	<10°C
(e) Initial Boiling Point:	330 °C
(f) Flammability:	Not available
(g) Lower and upper explosion limits:	Estimated value: 0.6% - 11.5%
(h) Flash Point:	>200°C
(i) Auto-ignition temperature:	>600°C
(j) Decomposition Temperature:	Not available.
(k) pH:	Estimated value. pH: 7
(l) Kinematic Viscosity:	>2000 cP @ 25°C
(m) Solubility:	Insoluble in water.
(n) Partition coefficient n-octanol/water (log value):	Not available.
(o) Vapour pressure:	0.01 Pa @ °C
(p) Relative Density:	1.12
(q) Relative Vapour density:	8.5
(r) Particle Characteristics:	not relevant

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
Chemical stability: Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Hazardous reactions: Not applicable. May polymerise.

10.4. Conditions to avoid

Conditions to avoid: Avoid contact with water.

10.5. Incompatible materials
Materials to avoid: Strong oxidising agents.

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 nitrogen.

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: No information available.

Other health effects: There is no evidence that the product can cause cancer.

Acute toxicity - inhalation

ATE inhalation (vapours mg/l): 30.56
ATE inhalation (dusts/mists mg/l) 4.17

Skin corrosion/irritation - Animal data:	Irritating
Serious eye damage/irritation:	Moderately irritating.
Respiratory sensitisation:	Sensitising
Skin sensitisation:	Not determined
Carcinogenicity:	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity:	No specific target organs known.

Reproductive toxicity

Reproductive toxicity – fertility:	Not available
Reproductive toxicity – development:	This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity (STOT) - repeated exposure:
Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard:	Not anticipated to present an aspiration hazard, based on chemical structure.
General information:	No specific health hazards known.

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 small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.

Route of entry: Inhalation Skin and/or eye contact

Medical symptoms: **I**rritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.

Medical considerations: Chronic respiratory and obstructive airway diseases.

Toxicological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Acute toxicity - oral
Acute toxicity oral (LD50 mg/kg): 10,000.0
Species: Rat

ATE oral (mg/kg): 10,000.0

Acute toxicity - dermal
Acute toxicity dermal (LD50 mg/kg): 9,400
Species: Rabbit

ATE dermal (mg/kg): 9,400

Acute toxicity - inhalation
Acute toxicity inhalation (LC50 vapours mg/l): 0.493
Species: Rat

Acute toxicity inhalation (LC50 dust/mist mg/l): 0.31
Species: Rat

ATE inhalation (vapours mg/l): 11.0

ATE inhalation (dusts/mists mg/l): 1.5

Skin corrosion/irritation - Animal data: Irritating.

Serious eye damage/irritation: Moderately irritating.

Respiratory sensitisation: Sensitising

Skin sensitisation: Not determined

Carcinogenicity: Suspected carcinogen based on limited evidence.

Target organ for carcinogenicity: No specific target organs known.

Reproductive toxicity - development:
This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity (STOT) - repeated exposure:
Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard:
Not anticipated to present an aspiration hazard, based on chemical 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 small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.

Route of entry: 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.

11.2 Information on other hazards
No endocrine disrupting properties.

Section 12: Ecological information

Ecotoxicity: The product is not expected to be hazardous to the environment

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Ecotoxicity: The product is not expected to be hazardous to the environment

12.1. Toxicity

Acute toxicity - fish	LC50, 96 hours, 96 hours: > 1000 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC50, 48 hours: >500 mg/l, Daphnia magna
Acute toxicity - aquatic plants.	EC50, 72 hours, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Acute toxicity - fish	LC50, 96 hours, 96 hours: > 1000 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC50, 48 hours: >500 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC50, 72 hours, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC50, 3 hours: 100 mg/l, Activated sludge
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 10 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability:	The product is not readily biodegradable.
Stability (hydrolysis):	Reacts with water
Biological oxygen demand:	< 10 g O2/g substance

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Persistence and degradability:	The product is not readily biodegradable.
Stability (hydrolysis):	Reacts with water
Biological oxygen demand:	< 10 g O2/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential: The product does not contain any substances expected to be bioaccumulating.

Partition coefficient: Not available

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Bioaccumulative potential: The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility: The product is non-volatile.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Mobility: The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment: This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Results of PBT and vPvB assessment: This product does not contain any substances classified as PBT or vPvB

12.6 Endocrine disrupting properties

Endocrine disrupting properties : None know.

12.7. Other adverse effects

Other adverse effects: None known.

Section 13: Disposal considerations

13.1. Waste treatment methods

General information: Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority

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: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number
UN number: Not applicable

14.2. UN proper shipping name
Shipping name: Not applicable

14.3. Transport hazard class(es)
No transport warning sign required.

Transport labels: Not applicable

14.4. Packing group
Packing group: Not applicable

14.5. Environmental hazards
Environmentally hazardous / Marine pollutant: No

14.6. Special precautions for user:
Special precautions for user: Not applicable

14.7 Maritime transport in bulk according to IMO instruments
Not relevant

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).
The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation:

EU legislation:
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).
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).
Commission Directive 91/322/EEC of 29 May 1991 on establishing indicative limit values by implementing Council Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work.
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).
REGULATION (EU) No 528/2012 (as amended) concerning the making available on the market and use of biocidal products.
REGULATION (EU) 2020/1149
concerning the restriction of Chemicals (REACH) as regards diisocyanates

15.2. Chemical Safety Assessment
Chemical safety assessment: No chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

Section 16: Other information

The full text for Hazard Statements in section 16 relates to the reference numbers in sections 2 and 3 and not necessarily the finished product classification.

As from 24 August 2023 adequate training is required before industrial or professional use.

Hazard statements in full:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Store Between: Store Between 5C – 25C

Contains SVHC: No

Sources of key data used to compile the Safety Data Sheet:
Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date:	26th October 2022
Version number:	5
Revision Comments:	Updated classification and formatting and data in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Legal Disclaimer:
This product should be used as directed by EnviroStik Holdings (UK) Ltd. For further information consult the application data sheet.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

* These figures are typical and do not constitute a specification.

Annex - Exposure Scenario

1. Short title of Exposure Scenario
- Professional end use in adhesives and sealants and other composite material
Sector of use : Industrial uses: Uses of substances as such or in preparations at industrial sites (SU 3)
Professional uses: Public domain (administration, education, entertainment services, craftsmen) (SU 22)
Process category : Use in closed, continuous process with occasional controlled exposure (PROC2), Use in closed batch process (synthesis or formulation) (PROC3), Use in batch and other process (synthesis) where opportunity for exposure arises (PROC4), Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) (PROC5), Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities (PORC8a), Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities (PROC8b), Roller application or brushing (PROC10), Treatment of articles by dipping and pouring (PROC13), Production of preparations or articles by tabletting, compression, extrusion, palletisation (PROC14).
Environmental release category:
Industrial use resulting in inclusion into or onto a matrix (ERC5), Wide dispersive indoor use resulting in inclusion into or onto a matrix (ERC8c), Wide dispersive outdoor use resulting in inclusion into or onto a matrix (ERC8f).

Lead substances for the respective exposure routes:

Priority substance(s), Respiratory sensitiser: - diphenylmethane-diisocyanate, isomers and homologues For RMMs see chapter 8 of the SDS. diphenylmethane-4,4'-diisocyanate

Lead substance(s), Oral: - diphenylmethane-diisocyanate, isomers and homologues For RMMs see chapter 8 of the SDS. diphenylmethane-4,4'-diisocyanate

Lead substance(s), Inhalative: - diphenylmethane-4,4'-diisocyanate

Lead substance(s), Dermal: - diphenylmethane-diisocyanate, isomers and homologues For RMMs see chapter 8 of the SDS. diphenylmethane-4,4'-diisocyanate

Lead substance(s), Eyes: - diphenylmethane-diisocyanate, isomers and homologues For RMMs see chapter 8 of the SDS. diphenylmethane-4,4'-diisocyanate

Lead substance(s), aquatic environment: - Not relevant

2. Description of activities/process(es) covered in the Exposure Scenario
Only the uses defined in the short title and the use descriptors listed in 1 above are regarded as safe/covered within this Exposure Scenario.

3. Operational conditions
Indoor/Outdoor use

Duration and frequency
Workers

Covers daily exposures up to 8 hours (unless stated differently).
Environment
Emission days per year: 365

4.1 Physical form
Liquid substance (unless stated differently)
Biodegradability: Not biodegradable

4.2 Concentration of substance in the mixture
Covers the percentage of the substance in the product up to 100 % (unless stated differently).

5. Other operational conditions
Used in open systems
Dry processes
Human factors not influenced by risk management
None identified for this scenario.
Environmental factors not influenced by risk management
Local freshwater dilution factor: 10 (default, used in calculation of worst case scenarios)
Local marine water dilution factor: 100 (default, used in calculation of worst case scenarios)

6. Risk Management Measures

6.1.1 Occupational measures

These measures are for all contributing scenarios at product temperatures BELOW 40 °C for pure
MDI or BELOW 45 °C for other MDI based substances:
Technical protective measures: Provide a good standard of general ventilation (not less than 3
to 5 air changes per hour).
Personal protective measures: Avoid all skin contact with product, clean up contamination/spills
as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any
skin contamination immediately. Provide basic employee training to prevent / minimize exposures
and to report any skin problems that may develop. Use suitable eye protection and gloves. Wear
suitable coveralls to prevent exposure to the skin.

These measures are for all contributing scenarios at product temperatures ABOVE 40 °C for pure
MDI or ABOVE 45 °C for other MDI based substances:
Technical protective measures: Provide a good standard of general ventilation (not less than 3
to 5 air changes per hour). Provide extraction ventilation at points where emissions occur.

Provide extract ventilation to material transfer points and other openings. Handle in a fume
cupboard or under extract ventilation.
Personal protective measures: Avoid all skin contact with product, clean up contamination/spills
as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any
skin contamination immediately. Provide basic employee training to prevent / minimize exposures
and to report any skin problems that may develop. Use suitable eye protection and gloves. Wear
suitable coveralls to prevent exposure to the skin. If above technical/organisational control
measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140
with Type A filter or better.

Additional measures are specific for the following contributing scenarios:

6.1.2 Consumer related measures
No consumer uses identified.

6.2 Environment related measures
- Fraction of emissions to the different environmental compartments:
Release fraction to air from process:
0.15
Release fraction to wastewater from process:
0.01
Release fraction to soil from process (regional only):
0.005

- Technical conditions and measures at process level (source) to prevent release:
Common practices vary across sites thus conservative process release estimates used.
- Technical onsite conditions and measures to reduce or limit discharges, air emissions and
releases to soil:

Air: No air emission controls required; required removal efficiency is 0%.
Soil: Soil emission controls are not applicable as there is no direct release to soil.
- Organizational measures to prevent/limit release from site:
Water: Prevent discharge of undissolved substance to or recover from wastewater.
- Conditions and measures related to municipal sewage treatment plant:

Estimated substance removal from wastewater via domestic sewage treatment is 40%.

Assumed domestic sewage treatment plant effluent flow is 2000 m^3/d.

Sludge should be incinerated, contained or reclaimed for incineration.

7. Waste related measures
Not applicable.

8. Prediction of exposure
8.1. Health
RMM efficiencies for inhalation exposure:

Local exhaust ventilation: Variable, reflected in measured data.
Short term exposure:
Workers (inhalation)
Method: Measured data has been used for estimation
PROC 2 : 0.026 mg/m³
PROC 3 : 0.018 mg/m³
PROC 4 : 0.016 mg/m³
PROC 5 : 0.058 mg/m³
PROC 8a : 0.058 mg/m³
PROC 8b : 0.058 mg/m³
PROC 10 : 0.034 mg/m³
Indoor use
PROC 10 : 0.034 mg/m³
Outdoor use
PROC 13 : 0.035 mg/m³
PROC 14 : 0.012 mg/m³
Workers (dermal)
Method: Qualitative approach used to conclude safe use.
Due to the applied RMMs it is considered that the risks of dermal exposure are sufficiently controlled.

Long term exposure:
Workers (inhalation)
Method: Measured data has been used for estimation
PROC 2 : 0.013 mg/m³
PROC 3 : 0.009 mg/m³
PROC 4 : 0.008 mg/m³
PROC 5 : 0.029 mg/m³
PROC 8a : 0.029 mg/m³
PROC 8b : 0.029 mg/m³
PROC 10 : 0.017 mg/m³
Indoor use
PROC 10 : 0.017 mg/m³
Outdoor use
PROC 13 : 0.017 mg/m³
PROC 14 : 0.006 mg/m³
Workers (dermal)
Method: Qualitative approach used to conclude safe use.
Due to the applied RMMs it is considered that the risks of dermal exposure are sufficiently controlled.

8.2. Environment
Method: Used EUSES model
PEC
Air : Not relevant
Freshwater : 0.056 mg/l

(adhesives and sealants)
Marine water : 0.00869 mg/l
(adhesives and sealants)
Sediment : Not relevant
Soil : 0.271 mg/kg dry weight
STP (sewage-treatment plant) : 0.492 mg/l
(adhesives and sealants)
Secondary poisoning : Not relevant
Humans via the environment : Not relevant

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

9. Guidance to downstream user
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 6 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Further information on the assumptions contained in this Exposure Scenario can be found at: www.ISOPA.org