

Safety Data Sheet

BoundWorx[®] Part B

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

1.1. Product identifier

Product name BoundWorx[®] Part B
Product number
REACH registration number 01-2119485796-17-0000

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

Identified uses non-volatile isocyanate
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier RESIN BONDED LTD
UNIT F1
BIRD IN EYE FARM
UCKFIELD
TN22 5HA
T: +44 (0) 1825 891329
E: info@resinbonded.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0)1825 891329 (08:00-17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H332 Elicitation - EUH208 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	Xn;R20. Xi;R37. R43.
Human health	Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Pictogram



Signal word	Warning
Hazard statements	H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H335 May cause respiratory irritation.
Precautionary statements	EUH204 Contains isocyanates. May produce an allergic reaction. P260 Do not breathe vapours. 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. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/attention. 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

HEXAMETHYLENE-1,6 DIISOCYANATE HOMOPOLYMER,
HEXAMETHYLENE-DIISOCYANATE

**Supplementary
precautionary statements**

P261 Avoid breathing vapour/spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 IF IN EYES:
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HEXAMETHYLENE-1,6 DIISOCYANATE HOMOPOLYMER	60-100%
CAS number: 28182-81-2	REACH registration number: 012119485796-17-0000
Classification	Classification (67/548/EEC or 1999/45/EC) Xn;R20. Xi;R37. R43.
Skin Sens. 1 - H317	
Acute Tox. 4 - H332	
STOT SE 3 - H335	
STOT SE 3 - H335	
STOT SE 3 - H335	

Revision: 21

HEXAMETHYLENE-DI-ISOCYANATE			<1%
CAS number: 822-06-0	EC number: 212-485-8	REACH registration number: 012119457571-37-0000	
Classification		Classification (67/548/EEC or 1999/45/EC) T;R23 R42/43 Xi;R36/37/38	
Skin Irrit. 2 - H315			
Eye Irrit. 2 - H319			
Resp. Sens. 1 - H334			
Skin Sens. 1 - H317			
Acute Tox. 3 - H331			
STOT SE 3 - H335			
STOT SE 3 - H335			
STOT SE 3 - H335			

The Full Text for all R-Phrases and 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.

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.

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. 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 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 noncombustible, 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
HEXAMETHYLENE-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

WEL = Workplace Exposure Limits

Ingredient comments WEL = Workplace Exposure Limits

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: Nitrile rubber.
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.
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

Appearance	Coloured liquid.
Colour	Brown.
Odour	Musty (mouldy).
Odour threshold	Not available
pH	Not available
Melting Point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	Slow
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Other flammability	Not available.
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.24 @ 20°C
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.

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.
------------------	---

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable. May polymerise.
---	---------------------------------

10.4. Conditions to avoid

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 nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

Acute toxicity – dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,000.0

Species Rabbit

Acute toxicity – inhalation

Acute toxicity inhalation (LD₅₀ mg/kg) 0.493

Species Rat

ATE inhalation (gases ppm) 4,439.75

ATE inhalation (vapours mg/l) 10.93

ATE inhalation (dusts/mists mg/l) 1.49

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.

Aspiration hazard

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. 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.

SECTION 12: Ecological information

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

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

12.3. Bioaccumulative potential

Bioaccumulative potential

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

Partition coefficient

Not available.

12.4. Mobility in soil

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.

12.6. Other adverse effects

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.

Waste class

070208

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

**Environmentally hazardous
substance/marine pollutant** No

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: Transport information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Issued by	Compliance
Revision date	01/06/2015
Revision	20
Risk phrases in full	R20 Harmful by inhalation. R23 Toxic by inhalation. R36/37/38 Irritating to eyes, respiratory system and skin. R37 Irritating to respiratory system. R42/43 May cause sensitisation by inhalation and skin contact. R43 May cause sensitisation by skin contact.

Hazard statements in full

EUH208 Contains HEXAMETHYLENE-DI-ISOCYANATE. May produce an allergic reaction.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Store Between

Store Between 5°C - 25°C