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## SAFETY DATA SHEET

Revision: 19 Jan 2021

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

#### 1.1 Product identifier

- Product Name: TriDrive UV Resistant Resin Bound Paving System Part B
- Product Part Number: TriDrive UV Resistant Resin Bound Paving System Part B

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

- Use of the substance/mixture: Professional Two Component Aliphatic Stone Binder
- Use advised against: No specific uses advised against are identified

#### 1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Tricel Composites (GB) Limited
- Address of Supplier: Unit A, Fox Way,  
Off Atkinson Street, Leeds,  
West Yorkshire LS10 1PS,  
United Kingdom.
- Telephone: +44 (0) 113 270 3133
- Responsible Person: sales@tridrive.co.uk
- Email: sales@tridrive.co.uk

#### 1.4 Emergency telephone number

- Emergency Telephone: +44 (0) 113 270 3133
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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

- Classification according to 1272/2008/EC
- Physical hazards: Not Classified
- Health hazards: H317: May cause an allergic skin reaction  
H332: Harmful if inhaled  
H335: May cause respiratory irritation
- Environmental hazards: Not Classified
- CLP: Acute Tox. 4, Skin Sens. 1, STOT SE 3

#### 2.2 Label elements



- Signal Word: Warning
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## SECTION 2: Hazards identification (....)

- Hazard statements
  - May cause an allergic skin reaction.
  - Harmful if inhaled.
  - May cause respiratory irritation.
  - Contains isocyanates. May produce an allergic reaction.
- Precautionary statements
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - IF ON SKIN: Wash with plenty of soap and water.
  - Avoid breathing dust/fume/gas/mist/vapours/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Call a POISON CENTRE or doctor if you feel unwell.
  - If skin irritation or rash occurs: Get medical advice/attention.

### 2.3 Other hazards

- Contains: ISOCYANATES

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## SECTION 3: Composition/information on ingredients

### 3.1 Composition

- Hexamethylene diisocyanate oligomers
  - CAS Number: 28182-81-2
  - EC Number: 931-274-8
  - REACH Registration Number: 01-2119485796-17-0000
  - Concentration: 99 - 100%
  - Categories: Acute Tox. 4, Skin Sens. 1, STOT SE 3
  - Symbols: GHS07
  - H Statements: H317, H332, H335

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Contact with eyes
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Remove contact lenses, if present and easy to do. Continue rinsing.
  - Get immediate medical advice/attention.
  - Seek medical attention if irritation persists
- Contact with skin
  - After contact with skin, wash immediately with plenty of soap and water
  - Take off contaminated clothing and wash it before reuse.
  - If skin irritation or rash occurs: Get medical advice/attention.
- Ingestion
  - If swallowed, rinse mouth with water (only if the person is conscious)
  - Give water or milk to drink
  - Do not induce vomiting

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## SECTION 4: First aid measures (....)

Never make an unconscious person vomit or drink fluids  
If vomiting occurs turn patient on side  
Get medical advice/attention if you feel unwell.

- Inhalation  
If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If breathing is difficult, oxygen should be given by a trained person  
Seek medical advice if necessary

### 4.2 Most important symptoms and effects, both acute and delayed

- May cause dry throat
- May cause headache
- May cause nausea/vomiting
- May cause redness and irritation
- May cause shortness of breath
- May cause sensitisation by skin contact

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
- If breathing is difficult, oxygen should be given by a trained person

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
- Do not use water jets

### 5.2 Special hazards arising from the substance or mixture

- Hazardous Products of Combustion: Nitrogen and carbon oxides may be formed, Cyanide compounds may be formed

Containers can burst violently or explode when heated, due to excessive pressure build-up.

### 5.3 Advice for firefighters

Protective actions during firefighting:

Avoid breathing fire gases or vapours, evacuate area and keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Due to reaction with water producing CO<sub>2</sub> gas, a hazardous buildup of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated. Reaction between water and hot isocyanate may be vigorous. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs notify appropriate authorities.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Safety boots, gloves, safety helmet and protective clothing should be worn. Firefighters clothing conforming to European Standard EN469 will provide a basic level of protection for chemical incidents

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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

### **6.2 Environmental precautions**

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

### **6.3 Methods and material for containment and cleaning up**

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. For small spillages absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. For large spillages, if leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### **6.4 Reference to other sections**

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

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from

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## SECTION 7: Handling and storage (....)

damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

This product will react with moisture to form a polyurethane, If an open container becomes contaminated with moisture do not reseal as this can lead to pressure increase within the container.

### 7.3 Specific end use(s)

- The identified uses for this product are detailed in Section 1.2

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## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure controls

Occupational exposure limits of the components:

Hexamethylene Diisocyanate Oligomers - CAS 28182-81-2:

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup> (NCO)

Short-term exposure limit (15-minute): WEL 0.07mg/m<sup>3</sup> (NCO)

Sen

WEL = Workplace Exposure Limit

Sen = Substance has the capacity to cause occupational asthma

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Worker - Inhalation Acute local effects: 1 mg/m<sup>3</sup>

Worker - Inhalation Long-term local effects: 0.5 mg/m<sup>3</sup>

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Fresh water: 0.127 mg/l

Marine water: 0.0127 mg/l

Intermittent release: 1.27 mg/l

Sediment (freshwater): 266700 mg/kg

Sediment (marinewater): 26670 mg/kg

Sewage treatment plant: 38.28 mg/l

Soil: 53182 mg/kg dw

### 8.2 Precautionary measures

Appropriate Engineering Controls:

Provide adequate ventilation. Personal, workplace or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Personal Protective Equipment:

Eye/Face Protection:

Eyewear complying with EN 166 should be worn if a risk assessment indicates eye contact is possible. If an inhalation hazard also exists, a full-face respirator may be required instead.

Hand Protection:

Chemical-resistant, impervious gloves complying to European Standard EN 374 should be worn if a risk assessment indicates skin contamination is possible. Examples of gloves materials that might provide suitable protection include: Butyl rubber (BR), Nitrile rubber (NR), Chloroprene

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## SECTION 8: Exposure controls/personal protection (....)

rubber (Neoprene). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended. Check during use that gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes of gloves are recommended.

### Other Skin and Body Protection:

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

### Respiratory Protection:

Under normal use of the product respiratory protection should not be required. If a risk assessment indicates inhalation of contaminants is possible respiratory protection should comply with the approved standard. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and that the filter is changed regularly. Gas and combined filter cartridges should comply with European Standard EN 14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN 136. Half mask or quarter mask respirators with replaceable filter cartridges should comply with European Standard EN 140.

### Hygiene Measures:

Provide eyewash station and safety shower, Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and work areas every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventative industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

### 8.3 Environmental exposure controls

Keep containers tightly sealed when not in use. Avoid spillage or runoff entering drains, sewers or watercourses. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Colour: colourless
- Appearance: Liquid
- Flammability: Not flammable
- Flash point - not applicable
- pH - not applicable
- Solubility in water: Insoluble in water
- Solubility in other solvents: miscible in most organic solvents

### 9.2 Other information

- This safety datasheet only contains information relating to safety and does not replace any product information or product specification

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

- Reacts slowly with moist air or water

### **10.2 Chemical stability**

The main removal mechanism of HMDI based products in the environment is hydrolysis. HMDI based products react quickly with water to form predominantly solid, insoluble polyurethanes or polyureas. Under conditions typical of many types of environmental contact, i. e. with relatively poor dispersion of the denser isocyanate, the interfacial reaction leads to the formation of a solid crust encasing partially or unreacted material. This crust restricts ingress of water and hence slows and modifies hydrolysis.

### **10.3 Possibility of hazardous reactions**

- Carbon dioxide may be formed

### **10.4 Conditions to avoid**

- Keep away from heat and moisture

### **10.5 Incompatible materials**

- No hazardous reactions known if used for its intended purpose

### **10.6 Hazardous decomposition products**

- May polymerise on exposure to heat and moisture
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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

Acute toxicity:

Acute Tox. 4 - Harmful if inhaled

Skin corrosion/irritation:

Not classified based on available information

Serious eye damage/eye irritation:

Not classified based on available information

Respiratory sensitisation:

Not classified based on available information

Skin sensitisation:

Skin Sens. 1 - May cause sensitisation or allergic reactions in sensitive individuals

Germ cell mutagenicity:

Not classified based on available information

Carcinogenicity:

Not classified based on available information

Reproductive toxicity:

Not classified based on available information

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## SECTION 11: Toxicological information (....)

Specific target organ toxicity - single exposure:  
STOT SE 3 - May cause respiratory irritation

Specific target organ toxicity - repeated exposure:  
Not classified based on available information

Aspiration hazard:  
Not classified based on available information

### Further Information:

The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Symptoms of over-exposure may include headache, nausea, shortness of breath, sore throat, or redness on the skin.

### Toxicological data for the components:

Hexamethylene diisocyanate oligomers – CAS 28182-81-2:

Acute inhalation toxicity	: LC50/4h: 0.467 mg/L Species: Rat Method: OECD Test 403 Test atmosphere: Mist
Acute oral toxicity	: LD50: >2500 mg/kg Species: Rat Method: OECD Test 401
Acute dermal toxicity	: LD50: ≥2000 mg/kg Species: Rat Method: OECD Test 402
Skin corrosion/irritation	: Species: Rabbit Result: Not irritating Method: OECD Test 404
Eye damage/ eye irritation	: Species: Rabbit Result: Not irritating Method: OECD Test 405
STOT - single exposure	: Route of exposure: Inhalation Target organs: Respiratory tract May cause respiratory irritation

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Not Classified
- Hexamethylene diisocyanate oligomers
  - IC<sub>50</sub> (algae): >100 mg/l (72 hr)
  - EC<sub>50</sub> (daphnia): 127 mg/l (48 hr)
  - LC<sub>50</sub> (fish): 100 mg/l (96 hr)



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## **SECTION 12: Ecological information (....)**

### **12.2 Persistence and degradability**

- No information available

### **12.3 Bioaccumulative potential**

- No information available

### **12.4 Mobility in soil**

- This product is not miscible with water and reacts to form a solid long chain polyurethane. Based on this it is unlikely to present a risk for mobility

### **12.5 Results of PBT and vPvB assessment**

- Not Classified

### **12.6 Other adverse effects**

- No hazardous reactions known if used for its intended purpose
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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Dispose of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to the handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Do not empty into drains, sewers or watercourses. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible

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## **SECTION 14: Transport information**

### **14.1 UN number or ID number**

- UN No.: Not applicable

### **14.2 UN proper shipping name**

- Proper Shipping Name: Not applicable

### **14.3 Transport hazard class(es)**

- Hazard Class: Not applicable

### **14.4 Packing group**

- Not applicable

### **14.5 Environmental hazards**

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## SECTION 14: Transport information (....)

- Not Classified

### 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
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## SECTION 15: Regulatory information

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

- United Kingdom - Health and Safety at Work etc Act 1974 (as amended)
- United Kingdom - The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulation 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]
- United Kingdom - EH40/2005 Workplace Exposure Limits
- EU - 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 Chemical (REACH) (as amended)
- EU - Commission Regulation (EU) No 2015/830 of 28 May 2015
- 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)

### 15.2 Chemical safety assessment

- This Safety Data Sheet does not constitute a workplace risk assessment
  - A chemical safety assessment has not been carried out for this product
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## SECTION 16: Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:- H317: May cause an allergic skin reaction. H332: Harmful if inhaled. H335: May cause respiratory irritation.

Full text of GHS H-Statements referred to under sections 2 and 3:

H317: May cause an allergic skin reaction

H332: Harmful if inhaled

H335: May cause respiratory irritation

Full text of EU H-Statements referred to under section 2 and 3:

EUH204: Contains isocyanates. May produce an allergic reaction

Full list of GHS P-statements

Prevention:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+352: IF ON SKIN: Wash with plenty of water

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER/ doctor if you feel unwell.

P321: Specific treatment (see P302+352 and P304+340 on this label).

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**SECTION 16: Other information (....)**

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.  
P363: Wash contaminated clothing before reuse.

Storage:

P403+233: Store in a well ventilated place. Keep container tightly closed.  
P405: Store locked up.

Disposal:

P501: Dispose of contents/containers to an authorised waste collection point

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

--- end of safety datasheet ---

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