SAFETY DATA SHEET
TradeBound UVR

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

1.1. Product identifier

Product name TradeBound UVR

Product number TradeBound UVR Part B

CAS number 28182-81-2

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

Identified uses Hardener.

1.3. Details of the supplier of the safety data sheet

Supplier

RESINDRIVES.CO.UK LTD
UNIT 1 SOUTH BRADFORD TRADING EST
LOW MOOR
BRADFORD
BD12 0NQ
UK
+44 (0) 1274 699233
+44 (0) 1274699233
OFFICE@RESINDRIVES.CO.UK
24 HOUR EMERGENCY NUMBER: 01274 699233

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) R43.

Human health May irritate eyes.

Environmental The product is not expected to be hazardous to the environment.

2.2. Label elements

Pictogram

TradeBound UVR

Signal word	Warning
Hazard statements	H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H335 May cause respiratory irritation.
Precautionary statements	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P312 Call a POISON CENTER/doctor if you feel unwell. P370 In case of fire: P378 Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501A This material and its container must be disposed of as hazardous waste.
Contains	HEXAMETHYLENE DIISOCYANATE OLIGOMERS

2.3. Other hazards

Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HEXAMETHYLENE DIISOCYANATE OLIGOMERS **60-100%**

CAS number: 28182-81-2 EC number: 500-060-2

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Sens. 1 - H317 Acute Tox. 4 - H332 STOT SE 3 - H335 STOT SE 3 - H335	Xi; R43

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	Immediately remove contaminated clothing.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Difficulty in breathing. Get medical attention.
Ingestion	Do not induce vomiting. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

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

General information Not applicable.

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

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

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5.1. Extinguishing media

Suitable extinguishing media Foam. Powder. Carbon dioxide (CO2). Water spray.

Unsuitable extinguishing media Unsuitable extinguishing media: Water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards Burning releases: Carbon monoxide (CO). Carbon dioxide (CO2). Oxides of the following substances: Nitrogen. Isocyanates. Hydrogen cyanide (HCN). Do not breathe fumes/gas/vapour/spray.

5.3. Advice for firefighters

Protective actions during firefighting Do not allow run-off from fire-fighting to enter drains or water courses. or Soil

Special protective equipment for firefighters Suitable respiratory protection with full face piece and positive air supply. Air tight garment is required

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. Provide adequate general and local exhaust ventilation. Evacuate the area of all non-essential personnel.

6.2. Environmental precautions

Environmental precautions Do not allow to enter soil, waterways or waste water channels.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Remove mechanically; cover the remainder with wet, absorbant material (e.g sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO2!). Keep damp in a safe ventilated area for several days.

6.4. Reference to other sections

Reference to other sections For waste disposal, see section 13. 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 Provide adequate general and local exhaust ventilation. When spraying, wear a suitable supplied-air respirator. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes. Avoid inhalation of vapours. Keep away from food, drink and animal feeding stuffs. When using do not smoke. Wash hands after handling. Use appropriate skin cream to prevent drying of skin. Keep working clothes separate. Immediately remove contaminated clothing. The threshold limit values noted in Chapter 8 must be monitored. In all areas where isocyanate aerosols and/or vapour concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a way that the workplace exposure limits (WEL) is not exceeded. The air should be drawn away from the personnel handling the product. The precautions required in the handling of isocyanates must be taken.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

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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 DIISOCYANATE OLIGOMERS

Long-term exposure limit (8-hour TWA): OEL 0.02 mg/m³
Short-term exposure limit (15-minute): OEL 0.07 mg/m³
as NCO

OEL = Occupational Exposure Limit.

8.2. Exposure controls

Eye/face protection Wear tight-fitting, chemical splash goggles or face shield.

Hand protection Use protective gloves made of: Butyl rubber. Laminate of polyethylene and ethylene vinyl alcohol (PE/EVOH). Contaminated clothing and shoes must be discarded. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection Wear suitable protective clothing as protection against splashing or contamination.

Respiratory protection If product is applied by spraying, wear self-contained breathing apparatus. If ventilation is inadequate, suitable respiratory protection must be worn. Personnel with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not work with this product

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Colour Colourless.

Odour No characteristic odour.

Odour threshold Not determined. Not determined.

pH Not applicable.

Melting point ca. -51°C

Initial boiling point and range Not applicable, Decomposition°C @

Flash point ca. 228°C DIN EN 22719°C

Evaporation rate Not determined.

Upper/lower flammability or explosive limits Not applicable.

Vapour pressure < 0,0001 hPa @ 20°C (Vapour pressure of Hexamethylene-di-isocyanate: ca 0,007 hPa @ 20°C) @ °C

Vapour density Not determined.

Relative density ca. 1,17g/cm3 @ 20°C DIN 53217 @ °C

Solubility(ies) Immiscible at 15'C

Partition coefficient : log Pow@ ca. 9,81 (value calculated)

Auto-ignition temperature Not applicable.

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Viscosity	ca. 3.000 mPa.s @ 23°C DIN EN ISO 3219/A.3 @ °C
Explosive properties	Not determined.
Oxidising properties	Not determined.

9.2. Other information

Other information	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Reactions with the following materials may generate heat: Amines. Alcohols. The product reacts slowly with water resulting in the evolution of carbon dioxide.

10.2. Chemical stability

Stability	Avoid contact with the following materials: Amines. Alcohols. Water

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reactions with the following materials may generate heat: Amines. Alcohols. The product reacts slowly with water resulting in the evolution of carbon dioxide. In closed containers, pressure build up can result in distortion, blowing and in extreme cases, bursting of the container.

10.4. Conditions to avoid

Conditions to avoid	Avoid contact with the following materials: Amines. Alcohols. water

10.5. Incompatible materials

Materials to avoid	Amines. Alcohols. Water

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2.5
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	390.0
Species	Rat
ATE inhalation (dusts/mists mg/l)	1.5

Respiratory sensitisation

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Respiratory sensitisation	Guinea pig: Not applicable.

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Carcinogenicity

Carcinogenicity	Not determined.

Reproductive toxicity

Reproductive toxicity - fertility	Not applicable.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	Over-exposure, especially when spraying coatings containing isocyanate without the necessary precautions, entails the risk of concentration-dependent irritating effects on eyes, nose, throat and respiratory tracts. Delayed appearance of the complaints and development of hypersensitivity (difficulty breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from those effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin my cause tanning and irritant effects. Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyante sensitisation and respiratory reaction. Harmful if inhaled. May cause sensitisation by skin contact.
Inhalation	Irritating to respiratory system. Rabbit
Skin contact	Slightly irritating. to Rabbit
Eye contact	Slightly irritating. to Rabbit Mucous membranes

SECTION 12: Ecological Information

Ecotoxicity	Do not allow to enter soil, waterways or waste water channels.

12.1. Toxicity

Acute toxicity - fish	LC0, 96 hours, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC_0, 48 hours, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours, 72 hours: > 1.000 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC_{50}, 3 hours, 3 hours: 3.828 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability	The product is not readily biodegradable.
Stability (hydrolysis)	- Half-life : 7.7 hours 23°C @ °C

12.3. Bioaccumulative potential

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	: log Pow@ ca. 9,81 (value calculated)

12.4. Mobility in soil

Adsorption/desorption coefficient	Not applicable. Soil - : @ °C

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Henry's law constant < 0000001 Pa m3/mol @ 25°C

Surface tension Not applicable.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Reacts with water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not allow to enter drains, sewers or water courses.

Disposal methods Dispose of in accordance with local and national regulations. The packaging must be empty (drop-free when inverted). Where practical, containers and packaging should be recycled by a licensed contractor. Do not discharge into drains or watercourses or onto the ground.

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

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

Not applicable.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 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 No listing known.

15.2. Chemical safety assessment

Not applicable.

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SECTION 16: Other information

Revision date	03/10/2011
SDS number	20883
Risk phrases in full	R23 Toxic by inhalation. R36/37/38 Irritating to eyes, respiratory system and skin. R42/43 May cause sensitisation by inhalation and skin contact. R43 May cause sensitisation by skin contact.
Hazard statements in full	EUH208 Contains . May produce an allergic reaction. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H335 May cause respiratory irritation.