

## Safety Data Sheet according to Regulation (EC) 'No. 2015/830



### SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

<b>1.1 Product Identifier</b>	FLOWSEAL ULTRA HARDENER B	<b>Revision Date:</b>	21/10/2021
<b>Product Name:</b>	Flowseal Ultra Hardener B	<b>Supersedes Date:</b>	19/02/2021

**UFI Code:** 2WY0-40TX-600T-YX0Q

<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	Coatings and paints, thinners, paint removers. Manual activities involving hand contact. Widespread use leading to inclusion into/onto article (indoor). For use by appropriately trained applicators. Roller application or brushing. Low energy spreading of coatings. Advised against: Home DIY applications, because of the health hazards and training required.
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#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer:** Flowcrete Polska Sp. z o. o.  
Ul. Marywilska 34  
03-228 Warszawa  
Polska

Tel: +48 22 879 8907  
Fax: +48 22 879 8918  
ehs.uk@flowcrete.com  
www.flowcrete.com.pl/

**Datasheet Produced by:** ehs.uk@flowcrete.com

<b>1.4 Emergency telephone number:</b>	CHEMTREC +1 703 5273887 (Outside US)
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Giftinformasjonen: +47 22 59 13 00

### SECTION 2: Hazard Identification

#### 2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

#### HAZARD STATEMENTS

Other EU extensions

EUH204

Skin Sensitizer, category 1

H317

**2.2 Label elements****Symbol(s) of Product****Signal Word**

Warning

**Named Chemicals on Label**

Hexamethylene-1,6-diisocyanate homopolymer

**HAZARD STATEMENTS**

Other EU extensions	EUH204	Contains isocyanates. May produce an allergic reaction.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

**PRECAUTION PHRASES**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

**2.3 Other hazards**

No Information

**Results of PBT and vPvB assessment:**

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

**SECTION 3: Composition/Information On Ingredients****3.2 Mixtures****Hazardous ingredients**

<u>Name According to EEC</u>	<u>EINEC No.</u>	<u>CAS-No.</u>	<u>%</u>	<u>Classifications</u>
Hexamethylene-1,6-diisocyanate homopolymer	500-060-2	28182-81-2	75-100	H317 Skin Sens. 1

<u>CAS-No.</u>	<u>M-Factors</u>	<u>REACH Reg No.</u>
28182-81-2		01-2119488934-20

**Additional Information:** The text for CLP Hazard Statements shown above (if any) is given in Section 16.

**SECTION 4: First-aid Measures****4.1 Description of First Aid Measures**

**GENERAL NOTES:** When symptoms persist or in all cases of doubt seek medical advice.

**AFTER INHALATION:** Move to fresh air. Consult a physician after significant exposure.

**AFTER SKIN CONTACT:** Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Do NOT use solvents or thinners.

**AFTER EYE CONTACT:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

**AFTER INGESTION:** If symptoms persist, call a physician or Poison Control Centre immediately. Never give anything by

mouth to an unconscious person. If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel.

**Self protection of the first aider:**

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

May cause sensitization by skin contact.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**SECTION 5: Fire-fighting Measures****5.1 Extinguishing Media:**

Carbon Dioxide, Dry Chemical, Foam, Water Fog

**FOR SAFETY REASONS NOT TO BE USED:** Alcohol, Alcohol based solutions, any other media not listed above.

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

No Information

**5.3 Advice for firefighters**

Fire will produce dense black smoke containing hazardous combustion products (see section 10). In the event of fire, wear self-contained breathing apparatus.

**SECTION 6: Accidental Release Measures****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak.

**6.2 Environmental precautions**

Do not allow material to contaminate ground water system. Prevent product from entering drains. Keep the container open.

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

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). After cleaning, flush away traces with water. Refer to protective measures listed in sections 7 and 8.

**6.4 Reference to other sections**

**FURTHER INSTRUCTIONS:** Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

**SECTION 7: Handling and Storage****7.1 Precautions for safe handling**

Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used.

Handle in accordance with good industrial hygiene and safety practice. Keep working clothes separately. Keep away from food, drink and animal feedingstuffs. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product.

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

**CONDITIONS TO AVOID:** Do not freeze. Extremes of temperature and direct sunlight.

**STORAGE CONDITIONS:** Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

**7.3 Specific end use(s)**

Component of a resin flooring product. The mixing and application to be in accordance with the technical data sheets.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Ingredients with Occupational Exposure Limits (UK WELS)

Name	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
Hexamethylene-1,6-diisocyanate homopolymer	28182-81-2			0.07	0.02

Name	CAS-No.	OEL Note
Hexamethylene-1,6-diisocyanate homopolymer	28182-81-2	

**FURTHER ADVICE:** Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

### 8.2 Exposure controls

#### Personal Protection

**RESPIRATORY PROTECTION:** In case of insufficient ventilation wear suitable respiratory equipment. Respirator with a vapor filter.

**EYE PROTECTION:** Eye wash bottle with pure water. Safety goggles. Safety glasses with side-shields conforming to EN 166.

**HAND PROTECTION:** Impervious gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use.

**OTHER PROTECTIVE EQUIPMENT:** No Information

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

#### Chemical Name:

Hexamethylene-1,6-diisocyanate homopolymer

<b>EC No.:</b>	<b>CAS-No.:</b>
500-060-2	28182-81-2

#### DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation	1 mg/m <sup>3</sup>		0.5 mg/m <sup>3</sup>					
Dermal								

#### PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.199 mg/l
Fresh water sediments	44551 mg/kg
Marine water	0.0199 mg/l
Marine sediments	4455 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/l
soil (agricultural)	8884 mg/kg
Air	

## SECTION 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Colourless
<b>Physical State</b>	Liquid
<b>Odor</b>	slight
<b>Odor threshold</b>	Not determined

pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	255 - N.D.
Flash Point, (°C)	203
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure	< 0.00001 hPa @ 20°C
Vapour density	Not determined
Relative density	ca. 1.15
Solubility in / Miscibility with water	immiscible
Partition coefficient: n-octanol/water	log Pow ca. 8.38
Auto-ignition temperature (°C)	ca. 440°C
Decomposition temperature (°C)	ca. 150°C
Viscosity	Not determined
Explosive properties	Not applicable
Oxidising properties	Not applicable

## 9.2 Other information

VOC Content g/l:	<10
Specific Gravity (g/cm <sup>3</sup> )	0.138

## SECTION 10: Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water. Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4 Conditions to avoid

Do not freeze. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

No Information

### 10.6 Hazardous decomposition products

In case of fire **hazardous decomposition products** may be produced such as: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke. Preparation reacts slowly with water resulting in evolution of CO<sub>2</sub>. Evolution of CO<sub>2</sub> in closed containers causes overpressure and produces a risk of bursting.

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

#### Acute Toxicity:

Oral LD50:	No Information
Inhalation LC50:	No Information

Irritation: No information available.

<b>Corrosivity:</b>	No information available.
<b>Sensitization:</b>	Sensitizing (Contact with skin)
<b>Repeated dose toxicity:</b>	No information available.
<b>Carcinogenicity:</b>	No information available.
<b>Mutagenicity:</b>	No information available.
<b>Toxicity for reproduction:</b>	No information available.
<b>STOT-single exposure:</b>	Vapour/spray mist may irritate respiratory system and lungs. May cause an allergic skin reaction.
<b>STOT-repeated exposure:</b>	No information available.
<b>Aspiration hazard:</b>	No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.  
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer	> 2500 mg/kg (rat)	> 2001 mg/kg (rat)	18500 mg/kg		

**Additional Information:**

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

## SECTION 12: Ecological Information

### 12.1 Toxicity:

<b>EC50 48hr (Daphnia):</b>	No information
<b>IC50 72hr (Algae):</b>	No information
<b>LC50 96hr (fish):</b>	No information

### 12.2 Persistence and degradability:

The polyurea produced on contact with water is insoluble, inert, and nonbiodegradable. In air, the predominant degradation process is predicted to be a relatively rapid OH radical attack, by calculation and by analogy with related isocyanates.

### 12.3 Bioaccumulative potential:

Reacts with water to produce carbon dioxide and polyurea solid.

### 12.4 Mobility in soil:

not applicable

### 12.5 Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

### 12.6 Other adverse effects:

No information

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer	> 100 mg/l	> 1000 mg/l	> 100 mg/l (danio rerio)

## SECTION 13: Disposal Considerations

**13.1 WASTE TREATMENT METHODS:** If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**European Waste Code:** 080501\*  
**Packaging Waste Code:** 150110

## SECTION 14: Transport Information

14.1	UN number	Not applicable
14.2	UN proper shipping name	Not regulated for transport according to ADR/RID, IMDG, and IATA regulations.
	Technical name	Not applicable
14.3	Transport hazard class(es)	Not applicable
	Subsidiary shipping hazard	Not applicable
14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special precautions for user	Not applicable
	EmS-No.:	Not applicable
14.7	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 for the substance or mixture:**

**National Regulations:**

Denmark Product Registration Number:	Not available
Danish MAL Code:	00-3 (1993)
Danish MAL Code - Mixture:	00-3 (1993)
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
Germany WGK Class:	Not available
Directive 2004/42/CE :	<10
Covered by Directive 2012/18/EC (Seveso III):	Not applicable
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Not applicable

**Annex XIV - Authorisation List:**

CAS-No.      Name According to EEC

Not Applicable

**SVHC - Substances of very high concern (Candidate List):**

CAS-No.      Name According to EEC

Not Applicable

**15.2 Chemical Safety Assessment:**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: Other Information

### Text for CLP Hazard Statements shown in Section 3 describing each ingredient:

H317 May cause an allergic skin reaction.

#### Reasons for revision

Substance and/or Product Properties Changed in Section(s):

15 - Regulatory Information

This Safety Data Sheet (SDS) has been revised to meet the new EU CLP requirements. There have been both formatting and content changes based on the CLP classification (if applicable), please review each section of the SDS for specific changes.

#### List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;  
European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;  
European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);  
EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

#### Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m <sup>3</sup>	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container



RTI	Respiratory Tract Irritation
NE	Narcotic Effects

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.