Safety Data Sheet according to Regulation (EC) 'No. 2020/878

Construction Products Group Europe

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

1.1 Product Identifier

Product Name: Flowcoat PA331 Hardener B

Revision Date: 21/12/2022

Supersedes Date: 17/12/2021

UFI Code: KQ72-W0TC-N00H-X7DV

Nanoform: No

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

Coatings and paints, thinners, paint removers. Manual activities involving hand contact. Widespread use leading to inclusion into/onto article (indoor). Widespread use leading to inclusion into/onto article (outdoor). 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. Advised against: others than recommended

1.3 Details of the supplier of the safety data sheet

Manufacturer:

Tremco CPG Poland 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

1.4 Emergency telephone number: CHEMTREC +1 703 5273887 (Outside US)

SECTION 2: Hazards 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
Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335

2.2 Label elements

Symbol(s) of Product

Signal Word

Warning

Named Chemicals on Label

Hexamethylene diisocyanate, oligomers, Hexamethylene diisocyanate oligomerisation product, (uretdione type)

HAZARD STATEMENTS

Other EU extensions	EUH204	Contains isocyanates. May produce an allergic reaction.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.

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.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.

Endocrine disrupting properties - Toxicity

Name According to EEC	CAS-No.
No Information	

Endocrine disrupting properties - Ecotoxicity

Name According to EEC	CAS-No.
No Information	

SECTION 3: Composition/Information On Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Hazardous ingredients

Name According to EEC EINEC No. CAS-No. REACH Reg No.	%	Classifications	SCL Value: ATE Value: M-Factor:	
Hexamethylene diisocyanate, oligomers 500-060-2 28182-81-2 01-2119488177-26	75-100	H317-332-335 Acute Tox. 4 Inhalation, Skin Sens. 1, STOT SE 3 RTI	**SCL Value:** **ATE Value:** **M-Factor:**	- - -
Hexamethylene diisocyanate oligomerisation product, (uretdione type) 500-060-2 28182-81-2 01-2119488177-26	10 - <25	H317 Skin Sens. 1	**SCL Value:** **ATE Value:** **M-Factor:**	- - -

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. Show this safety data sheet to the doctor in attendance. Remove contaminated clothing and shoes.
AFTER INHALATION: Consult a physician after significant exposure. Keep respiratory tract clear. Remove person to fresh air. If signs/symptoms continue, get medical attention.
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.
AFTER EYE CONTACT: Keep eye wide open while rinsing. 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: Gently wipe or rinse the inside of the mouth with water. 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

No Information

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: Firefighting 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

Use water spray to cool unopened containers. Fire will produce dense black smoke containing hazardous combustion products (see section 10). In the event of fire, wear self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Contains isocyanates. See information supplied by the manufacturer.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

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

6.1.2 For emergency responders

No Information

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 8 and 13 for further information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Wear personal protective equipment. 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.
Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. 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: Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. Do not freeze.
STORAGE CONDITIONS: Store at room temperature in the original container. 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)

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 diisocyanate, oligomers	28182-81-2				0.02
Hexamethylene diisocyanate oligomerisation product, (uretdione type)	28182-81-2				0.02

Name	CAS-No.	OEL Note
Hexamethylene diisocyanate, oligomers	28182-81-2	
Hexamethylene diisocyanate oligomerisation product, (uretdione type)	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.

Chemical Name:

EC No.: **CAS-No.:**

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	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								
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	
Air	

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: Use chemical resistant gloves (EN 374): Nitrile rubber; thickness >=0,5 mm; breakthrough time >= 480 min. Isocyanates can harden gloves and increase the risk of their splitting. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use. Remove contaminated clothing and protective equipment before entering eating areas.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: At temperatures below 40°C, provide a good standard of general ventilation (not less than 5 air changes per hour). At temperatures over 40°C - and always if sprayed - exhaust ventilation is required. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Colour: Clear

Physical State	Liquid
Odor	Slight
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point or initial boiling point and boiling range (°C)	231°C - N.D.
Flash Point, (°C)	183
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Llower and upper explosive limit	Not determined
Vapour Pressure	ca. 4hPa at 20°C
Relative vapour density	Not determined
Density and/or relative density	ca. 1.15 g/cm3 at 20°C
Solubility in / Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Kinematic viscosity	ca. 596 mPa.s (20°C)
Particle characteristics	Not applicable to liquids

9.2 Other information

VOC Content g/l:	No Information
Specific Gravity (g/cm3)	0.120

SECTION 10: Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under recommended storage conditions. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

10.3 Possibility of hazardous reactions
Polymerises at about 200°C with evolution of CO2.

10.4 Conditions to avoid
Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. Do not freeze.

10.5 Incompatible materials
Keep away from oxidising agents, strongly acid or alkaline materials, as well as of amines, alcohols and water. Amines and alcohols cause exothermic reactions.

10.6 Hazardous decomposition products
In case of fire **hazardous decomposition products** may be produced such as**:** Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke. Preparation reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

SECTION 11: Toxicological information

11.1 Information on hazard classes as definied in Regulation (EC) No 1272/2008

Acute Toxicity:

Oral LD50: No information available.

Inhalation LC50: No information available.

Dermal LD50: No Information

Irritation: No information available.

Corrosivity: No information available.

Sensitization: May cause an allergic skin reaction.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: 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:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
28182-81-2	Hexamethylene diisocyanate, oligomers	> 5665 mg/kg (rat)			0.000	0.000
28182-81-2	Hexamethylene diisocyanate oligomerisation product, (uretdione type)	> 5665 mg/kg (rat)	> 2000 mg/kg (rat)		0.000	0.000

Additional Information:

In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Isocyanates may cause acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition.

11.2 Information on other hazards

Endocrine disrupting properties - Toxicity

Name According to EEC	CAS-No.
No Information	

SECTION 12: Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

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 Endocrine disrupting properties

Endocrine disrupting properties - Ecotoxicity

Name According to EEC	CAS-No.
No Information	

12.7 Other adverse effects: No information

CAS-No.	Name According to EEC	EC50 48hr	IC50 72hr	LC50 96hr
28182-81-2	Hexamethylene diisocyanate, oligomers	No information	No information	> 100 mg/L (danio rerio)
28182-81-2	Hexamethylene diisocyanate oligomerisation product, (uretdione type)	No information	No information	> 100 mg/L (danio rerio)

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: Dispose of as hazardous waste in compliance with local and national regulations. Container hazardous when empty. Empty containers should be taken to an approved waste handling site for recycling or disposal. The product should not be allowed to enter drains, water courses or the soil.

European Waste Code: 080501
Packaging Waste Code: 150110

SECTION 14: Transport Information

	ADR/RID	ADN	IMDG	IATA
14.1 UN-number	No Information	No Information	No Information	No Information
14.2 UN proper shipping name	Not regulated for transport according to U.S. DOT, ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to U.S. DOT, ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to U.S. DOT, ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to U.S. DOT, ADR/RID, IMDG, and IATA regulations.
14.3 Transport Hazard Class(es)	No Information	No Information	No Information	No Information
14.4 Packing Group	No Information	No Information	No Information	No Information
14.5 Enviromental Hazards	No Information	No Information	No Information	No Information

14.6 Special precautions for user Not applicable

EmS-No.: Not applicable

14.7 Maritime transport in bulk according to IMO intruments 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: Not available

Danish MAL Code - Mixture: Not available

Sweden Product Registration Number: Not available

Norway Product Registration Number: Not available

Germany WGK Class: 1

Directive 2004/42/CE : Not available

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, Regulation (CE) 1907/2006 - Authorisation List:

CAS-No.	Name According to EEC
Not Applicable	

SVHC - Substances of very high concern (Candidate List - Art. 59 REACH):

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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Reasons for revision

Revision Description Changed
Substance and/or Product Properties Changed in Section(s):
01 - Identification
02 - Hazard Identification
03 - Composition/Information On Ingredients
08 - Exposure Controls/Personal Protection
09 - Physical and Chemical Properties
11 - Toxicological Information
14 - Transportation Information
Revision Statement(s) Changed

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.
- Joint Research Centre in Ispra, Italy.
- Regulation (EC) 1272/2008 with subsequent amendments.
- Regulation (EC) 1272/2006 with subsequent amendments.
- Commission Regulation (EU) 2020/878
- EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"
- Safety Data Sheet from raw material supplier
- The classification of the product is based on the calculation methods set out in Annex I and Annex II of the CLP Reg. 1272/2008 on the exact composition of the formula

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/m3	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
IMO	International Maritime Organization
Note P:	The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene
Note 10:	The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

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.