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



illbruck Flowcrete, Nullifire Vandex TREMCO Tryvit T Nudura

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

1.1	Product Identifier Product Name:	FLOWBIND LS PART B Flowbind LS Part B	Revision Date: Supersedes Date: Version Number:	08/08/2023 07/09/2020 1	
1.2	UFI Code: Nanoform: Relevant identified uses of the substance or mixture and uses advised against	FUT1-008T-Q009-R106 No Manual activities involving hand contact. Widespread use leading to inclusion into onto article (indoor). For use by appropriately trained applicators. Roller application brushing. Low energy spreading of coatings. Advised against: Home DIY applicat because of the health hazards and training required. Component of multicomponent coatings - Industrial and professional use. Advised against: others than recommend			
1.3	Details of the supplier of the safety	data sheet			
	Manufacturer:	Tremco CPG Poland Sp. z o. o. Ul. Marywilska 34			

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

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

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), CYCLOHEXANE,5-ISOCYANATO-1-(IS

HAZARD STATEMENTS

Other EU extensions Skin Sensitizer, category 1 Acute Toxicity, Inhalation, category 4 STOT, single exposure, category 3, RTI PRECAUTION PHRASES	EUH204 H317 H332 H335	Contains isocyanates. May produce an allergic reaction. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P243	Take precautionary measures against static discharge.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P273	Avoid release to the environment.
	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.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
	P501	Dispose of contents/container to waste treatment/disposal facility in accordance with local, state, and federal regulations.

ADDITIONAL INFORMATION

As from 24 August 2023 adequate training is required before industrial or professional use.

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

<u>Name According to EEC</u> <u>EINEC No.</u> <u>CAS-No.</u> <u>REACH Reg No.</u>	<u>%</u>	<u>Classifications</u>	SCL Value: ATE Value: M-Factor:		
Hexamethylene diisocyanate oligomerisation product, (uretdione type) 500-060-2 28182-81-2 01-2119488177-26	25 - <50	H317 Skin Sens. 1	SCL Value: ATE Value: M-Factor:	-	
Hexamethylene diisocyanate, oligomers 500-060-2 28182-81-2 01-2119488177-26	25 - <50	H317-332-335 Acute Tox. 4 Inhalation, Skin Sens. 1, STOT SE 3 RTI	SCL Value: ATE Value: M-Factor:	-	
CYCLOHEXANE,5- ISOCYANATO-1-(IS 500-125-5 53880-05-0 No Information	25 - <50	H317-335 Skin Sens. 1, STOT SE 3 RTI	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: Move to fresh air. Consult a physician after significant exposure. 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. Do NOT use solvents or thinners. AFTER EYE CONTACT: Consult a physician. Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Do NOT induce vomiting. 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 damage to organs through prolonged or repeated exposure. Harmful by inhalation. Irritating to respiratory system. Irritating to eyes and skin. May cause sensitization by inhalation and 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: Firefighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical

FOR SAFETY REASONS NOT TO BE USED: Do not use a solid water stream as it may scatter and spread fire. Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

Carbon monoxide, carbon dioxide, nitrogen oxide, cyanides, isocyanate vapours.

5.3 Advice for firefighters

Keep containers and surroundings cool with water spray. Fire will produce dense black smoke containing hazardous combustion products (see section 10). In the event of fire, wear self-contained breathing apparatus. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Avoid contact with skin, eyes and clothing. For personal protection see section 8.2. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak.

6.1.2 For emergency responders

See Section 7, 8 and 10 for further information.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Discharge into the environment must be avoided. May cause long-term adverse effects in the aquatic environment.

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). Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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

Persons susceptible to 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. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Protect from frost, heat and sunlight. Apply technical measures to comply with the occupational exposure limits (see section 8).

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. Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Avoid contact with the skin and the eyes.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid temperatures above 30 °C, direct sunlight and contact with sources of heat. Heat, flames and sparks. Avoid moisture. Do not freeze.

STORAGE CONDITIONS: Keep at temperatures between 5 and 25 °C. Do not freeze. Keep containers tightly closed in a dry, cool 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 multicomponent coatings. 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	<u>STEL mg/m3</u>	LTEL mg/m3
Hexamethylene diisocyanate oligomerisati product, (uretdione type)	or28182-81-2					0.02
Hexamethylene diisocyanate, oligomers	28182-81-2					0.02
CYCLOHEXANE,5-ISOCYANATO-1-(IS	53880-05-0					0.02
Name	CAS-No.	OEL Note				
Hexamethylene diisocyanate oligomerisation product, (uretdione type)	28182-81-2					
Hexamethylene diisocyanate, oligomers	28182-81-2					
CYCLOHEXANE,5-ISOCYANATO-1-(IS	53880-05-0					

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

		Wo	orkers		Consumers			
Route of	Acute effect	Acute effects	Chronic	Chronic effects	Acute effect	Acute effects	Chronic	Chronic effects
Exposure	local	systemic	effects local	systemic	local	systemic	effects local	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: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In case of insufficient ventilation wear suitable respiratory equipment. Wear a positive-pressure supplied-air respirator. Respirator with filter for organic vapor.

EYE PROTECTION: Eye wash bottle with pure water. Safety glasses. If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles (EN 166).

HAND PROTECTION: 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. Protective gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Wear rubber gloves. Protective gloves complying with EN 374: Viton®, Neoprene, Nitrile rubber, Butyl rubber.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. **ENGINEERING CONTROLS:** At temperatures below 30°C, provide a good standard of general ventilation. At temperatures over 30°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 p Colour:	p roperties Yellowish
	Physical State	Liquid
	Odor	Characteristic
	Odor threshold	Not determined
	рН	Not determined
	Melting point / freezing point (°C)	Not determined
	Boiling point or initial boiling point and boiling range (°C)	255 - N.D.
	Flash Point, (°C)	181
	Evaporation rate	Not determined
	Flammability (solid, gas)	Not determined
	Llower and upper explosive limit	Not determined
	Vapour Pressure	Not determined
	Relative vapour density	ca. 1.15 g/cm3 at 20°C

	Density and/or relative density	Not determined
	Solubility in / Miscibility with water	Not determined
	Partition coefficient: n-octanol/water	Not determined
	Auto-ignition temperature (°C)	ca. 430 °C
	Decomposition temperature (°C)	Not determined
	Kinematic viscosity	ca. 3,525 mPa.s. at 20°C
	Particle characteristics	Not applicable to liquids
9.2	Other information VOC Content g/I:	< 500 (A+B)
	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 normal conditions.

10.3 Possibility of hazardous reactions

Amines and alcohols cause exothermic reactions. Preparation reacts slowly with water resulting in evolution of CO2.

10.4 Conditions to avoid

Avoid temperatures above 30 °C, direct sunlight and contact with sources of heat. Heat, flames and sparks. Avoid moisture. 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.

10.6 Hazardous decomposition products

In case of fire **hazardous decomposition products** may be produced such as: Carbon monoxide, carbon dioxide and unburned hydrocarbons (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:	May cause respiratory irritation.
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 oligomerisation product, (uretdione type)	> 5665 mg/kg (rat)	> 2000 mg/kg (rat)		0.000	0.000
28182-81-2	Hexamethylene diisocyanate, oligomers	> 5665 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. This product may contain Titanium Dioxide, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. This classification is relevant when exposed to titanium dioxide in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

11.2 Information on other hazards

Endocrine disrupting properties - Toxicity

Name According to EEC

CAS-No.

No Information

12.1 Toxicity:

SECTION 12: Ecological Information

	l oxioly!	
	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 - Ecotoxici	ty
	Name According to EEC	CAS-No.
	No Information	

12.7 Other adverse effects:

No information

<u>CAS-No.</u>	Name According to EEC	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
28182-81-2	Hexamethylene diisocyanate oligomerisation product, (uretdione type)	No information	No information	> 100 mg/L (danio rerio)
28182-81-2	Hexamethylene diisocyanate, oligomers	No information	No information	> 100 mg/L (danio rerio)
53880-05-0	CYCLOHEXANE,5-ISOCYANATO-1-(IS	No information	No information	

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: Dispose of waste material at an approved hazardous waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Contaminated packaging to be disposed of as product. 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. 080501 - waste isocyanatesThe 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	ΙΑΤΑ
14.1	UN-number or ID number	No Information	No Information	No Information	No Information
14.2	UN proper shipping name	Not regulated for transport according to ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to ADR/RID, IMDG, and IATA regulations.	Not regulated for transport according to ADR/RID, IMDG, and IATA regulations.
14.3	Transport Hazard Class(es)	No Information	No Information	No Information	No Information
14.4	Packing Group	Not applicable	Not applicable	Not applicable	Not applicable
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	Not applicable

14.7 Maritime transport in bulk according to IMO intruments

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:	314417
Germany WGK Class:	Not available
Directive 2004/42/CE :	< 500 (A+B)
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 ap

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 Composition Information Changed Substance Chemical Name Changed Substance and/or Product Properties Changed in Section(s): 01 - Identification 02 - Hazard Identification

- UZ Hazard Identilication
- 03 Composition/Information On Ingredients
- 08 Exposure Controls/Personal Protection
- 09 Physical and Chemical Properties
- 11 Toxicological Information
- 14 Transportation Information
- 15 Regulatory 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 declared in sec. 2.2 is based on the calculation methods set out in Annex I and Annex II of the CLP Reg. 1272/2008 on the composition of the formula.

Acronym & Abbreviation Key:

CLP

Classification, Labeling & Packaging Regulation

Date Printed: 08/08/2023

EC European Commission EU European Union
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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
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 o
or incorporated in particles with aerodynamic diameter \leq 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.