

## SAFETY DATA SHEET

### FBM 7

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

##### 1.1. Product identifier

Trade name

FBM 7

Product no.

1823

Unique formula identifier (UFI)

D6D0-7074-100J-JY8T

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

Relevant identified uses of the substance or mixture

Paint Remover

Uses advised against

No special

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

Company and address

**Trion Tensid AB**

Svederusgatan 1-3

SE-75450 Uppsala

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19/04/2022

SDS Version

3.0

Date of previous version

06/04/2022 (3.0)

##### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Irrit. 2; H319, Causes serious eye irritation.

##### 2.2. Label elements

Hazard pictogram(s)



#### Signal word

Warning

#### Hazard statement(s)

Harmful if swallowed. (H302)

Causes skin irritation. (H315)

Causes serious eye irritation. (H319)

#### Safety statement(s)

##### General

-

##### Prevention

Wash hands thoroughly after handling. (P264)

Wear eye protection/protective gloves/protective clothing. (P280)

##### Response

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. (P301+P312)

Rinse mouth. (P330)

If eye irritation persists: Get medical advice/attention. (P337+P313)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)

##### Storage

-

##### Disposal

Dispose of contents/container to an approved waste disposal plant. (P501)

#### Hazardous substances

1-butylpyrrolidin-2-one

2-butoxyethanol

potassium hydroxide

2-aminoethanol

#### 2.3. Other hazards

##### Additional labelling

EUH066, Repeated exposure may cause skin dryness or cracking.

##### Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1-butylpyrrolidin-2-one	CAS No.: 3470-98-2 EC No.: 222-437-8 REACH: 01-2120062728-48-XXXX Index No.:	30-50%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	
dimethyl sulfoxide	CAS No.: 67-68-5 EC No.: 200-664-3	10-30%		

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

	REACH: 01-2119431362-50-XXXX			
	Index No.:			
2-butoxyethanol	CAS No.: 111-76-2 EC No.: 203-905-0 REACH: 01-2119475108-36 Index No.: 603-014-00-0	10-20%	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332	[1]
2-(2-ethoxyethoxy)ethanol	CAS No.: 111-90-0 EC No.: 203-919-7 REACH: 01-2119475105-42-XXXX Index No.:	1-10%		
potassium hydroxide	CAS No.: 1310-58-3 EC No.: 215-181-3 REACH: 01-2119487136-33 Index No.: 019-002-00-8	<2%	Acute Tox. 4, H302 Skin Corr. 1B, H314 (SCL: 2.00 %) Skin Corr. 1A, H314 Skin Irrit. 2, H315 (SCL: 0.50 %) Eye Irrit. 2, H319 (SCL: 0.50 %)	
2-aminoethanol	CAS No.: 141-43-5 EC No.: 205-483-3 REACH: 01-2119486455-28-XXXX Index No.: 603-030-00-8	<0,1%	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Acute Tox. 4, H332 STOT SE 3, H336 (SCL: 5.00 %)	[1]

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See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

[1] European occupational exposure limit

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### Skin contact

IF ON SKIN: Wash with plenty of water and soap.  
Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.  
If skin irritation occurs: Get medical advice/attention.

#### Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30°C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

#### Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting, unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

#### Burns

Not applicable

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides.

Nitrogen oxides (NO<sub>x</sub>)

Carbon oxides (CO / CO<sub>2</sub>).

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

### SECTION 6: Accidental release measures

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

Avoid direct contact with spilled substances.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

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

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 on "Disposal considerations" in regard of handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage temperature

4 - 25 Celcius

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

—

2-butoxyethanol

Long term exposure limit (8 hours) (ppm): 25

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 123

Short term exposure limit (15 minutes) (ppm): 50

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 246

Annotations:

BMVG = Biological Monitoring Guidance Value exists

Sk = Can be absorbed through the skin and lead to systemic toxicity.

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potassium hydroxide

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 2

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2-aminoethanol

Long term exposure limit (8 hours) (ppm): 1

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 2,5

Short term exposure limit (15 minutes) (ppm): 3

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 7,6

Annotations:

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

EH40/2005 Workplace exposure limits (Fourth Edition 2020).

### DNEL

Product/substance	1-butylpyrrolidin-2-one
DNEL	2,5 mg/kg bw/day

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	1-butylpyrrolidin-2-one
DNEL	2,5 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	1-butylpyrrolidin-2-one
DNEL	5 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	1-butylpyrrolidin-2-one
DNEL	17,4 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	1-butylpyrrolidin-2-one
DNEL	10 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	1-butylpyrrolidin-2-one
DNEL	70,5 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	59 mg/kbm
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	75 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	147 mg/kbm
Route of exposure	Inhalation
Duration	Short term – Local effects - General population

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-butoxyethanol
DNEL	26,7 mg/kg bw/day
Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	426 mg/kbm
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	89 mg/kg bw/day
Route of exposure	
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	98 mg/kg bw/day
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	125 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	246 mg/kbm
Route of exposure	Inhalation
Duration	Short term – Local effects - Workers
Product/substance	2-butoxyethanol
DNEL	1091 mg/kbm
Route of exposure	Inhalation
Duration	Short term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	89 mg/kg bw/day
Route of exposure	Dermal
Duration	Short term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	6,3 mg/kg bw/day

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	26.7 mg/kg bw/day
Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	6.3 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	147 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Local effects - General population
Product/substance	2-butoxyethanol
DNEL	426 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	59 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	246 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Local effects - Workers
Product/substance	2-butoxyethanol
DNEL	1091 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	98 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers



According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	83 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	61 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	30 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Local effects - Workers
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	50 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	25 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	37 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-(2-ethoxyethoxy)ethanol
DNEL	18 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Local effects - General population
Product/substance	hexyl D-glucoside
DNEL	595000 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	hexyl D-glucoside
DNEL	420 mg/m <sup>3</sup>

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	hexyl D-glucoside
DNEL	357000 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	hexyl D-glucoside
DNEL	124 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	hexyl D-glucoside
DNEL	35,7 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-aminoethanol
DNEL	1 mg/kg/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	2-aminoethanol
DNEL	3,3 mg/kbm
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-aminoethanol
DNEL	3,3 mg/kbm
Route of exposure	Inhalation
Duration	Long term – Local effects - Workers
Product/substance	2-aminoethanol
DNEL	0,24 mg/sqm
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	2-aminoethanol
DNEL	2 mg/kbm
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-aminoethanol
DNEL	2 mg/kbm
Route of exposure	Inhalation
Duration	Long term – Local effects - General population
Product/substance	2-aminoethanol
DNEL	3,75 mg/kg
Route of exposure	Oral
Duration	Long term – Systemic effects - General population

#### PNEC

Product/substance	1-butylpyrrolidin-2-one
PNEC	0,7955 mg/kg
Route of exposure	Soil
Duration of Exposure	Single
Product/substance	1-butylpyrrolidin-2-one
PNEC	06336 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	Single
Product/substance	1-butylpyrrolidin-2-one
PNEC	6,336 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	Single
Product/substance	1-butylpyrrolidin-2-one
PNEC	30,62 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	Continuous
Product/substance	1-butylpyrrolidin-2-one
PNEC	1 mg/L
Route of exposure	Water
Duration of Exposure	Single
Product/substance	1-butylpyrrolidin-2-one
PNEC	0,08 mg/L
Route of exposure	Marine water
Duration of Exposure	Single

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	1-butylpyrrolidin-2-one
PNEC	0,8 mg/L
Route of exposure	Freshwater
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	8,8 mg/L
Route of exposure	Freshwater
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	0,88 mg/L
Route of exposure	Marine water
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	9,1 mg/L
Route of exposure	Water
Duration of Exposure	Continuous
Product/substance	2-butoxyethanol
PNEC	463 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	34,6 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	3,46 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	2,33 mg/kg
Route of exposure	Soil
Duration of Exposure	Single
Product/substance	2-butoxyethanol
PNEC	20 mg/kg

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Predators
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	2.33 mg/kg
Route of exposure	Soil
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	3.46 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	34.6 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	463 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	880 µg/L
Route of exposure	Marine water
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	26.4 mg/L
Route of exposure	Intermittent release (freshwater)
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	8.8 mg/L
Route of exposure	Freshwater
Duration of Exposure	
Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	7,32 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	Single

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	0,732 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	Single
Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	500 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	Single
Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	0,198 mg/L
Route of exposure	Marine water
Duration of Exposure	Single
Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	1,98 mg/L
Route of exposure	Freshwater
Duration of Exposure	Single
Product/substance	2-(2-ethoxyethoxy)ethanol
PNEC	0,34 mg/kg
Route of exposure	Soil
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	0,176 mg/L
Route of exposure	Freshwater
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	0,018 mg/L
Route of exposure	Marine water
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	100 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	0,722 mg/kg

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Freshwater sediment
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	0,072 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	Single
Product/substance	hexyl D-glucoside
PNEC	0,654 mg/kg
Route of exposure	Soil
Duration of Exposure	Single
Product/substance	2-aminoethanol
PNEC	0,085 mg/L
Route of exposure	Freshwater
Duration of Exposure	
Product/substance	2-aminoethanol
PNEC	0,0085 mg/L
Route of exposure	Marine water
Duration of Exposure	
Product/substance	2-aminoethanol
PNEC	0,028 mg/L
Route of exposure	Intermittent release
Duration of Exposure	
Product/substance	2-aminoethanol
PNEC	0,434 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	
Product/substance	2-aminoethanol
PNEC	0,0434 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	
Product/substance	2-aminoethanol
PNEC	0,0367 mg/kg
Route of exposure	Soil
Duration of Exposure	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-aminoethanol
PNEC	100 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	

## 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

### Exposure scenarios

There are no exposure scenarios implemented for this product.

### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

### Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

### Hygiene measures

Take off contaminated clothing and wash it before reuse.

### Measures to avoid environmental exposure

No specific requirements

## Individual protection measures, such as personal protective equipment

### Generally

Use only CE marked protective equipment.

### Respiratory Equipment

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation	-	-	-

### Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn.	-	-



### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	0,4	>480	EN374-2



### Eye protection



According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Type	Standards
Wear safety glasses with side shields.	EN166



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Yellowish

Odour / Odour threshold

Solvent

pH

Testing not relevant or not possible due to nature of the product.

Density (g/cm<sup>3</sup>)

1.02

Kinematic viscosity

Testing not relevant or not possible due to nature of the product.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)

Testing not relevant or not possible due to nature of the product.

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

180-200

Vapour pressure

Testing not relevant or not possible due to nature of the product.

Relative vapour density

Testing not relevant or not possible due to nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)

95

Ignition (°C)

Testing not relevant or not possible due to nature of the product.

Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water

Soluble

n-octanol/water coefficient

Testing not relevant or not possible due to nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

### 9.2. Other information

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

#### Other physical and chemical parameters

No data available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available

#### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

#### 10.3. Possibility of hazardous reactions

No special

#### 10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

#### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Acute toxicity

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	300-2000 mg/kg ·
Other information	
Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	>2000 mg/kg ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Result	2000 mg/kg ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	2,2 mg/l (4 h) ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Rat
Route of exposure	Dermal
Test	LD50
Result	2270 mg/kg ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	220 mg/kg ·
Other information	
Product/substance	2-(2-ethoxyethoxy)ethanol
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	6031 mg/kg bw ·
Other information	
Product/substance	2-(2-ethoxyethoxy)ethanol
Test method	
Species	Rabbit
Route of exposure	Dermal

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Test	LD50
Result	9143 mg/kg bw ·
Other information	
Product/substance	2-(2-ethoxyethoxy)ethanol
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LD lo
Result	0,025 mg/L ·
Other information	
Product/substance	potassium hydroxide
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	273 mg/kg ·
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	>2000 mg/kg
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	>2000 mg/kg
Other information	
Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	
Species	Rat

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Route of exposure	Oral
Test	LD50
Result	>2000 mg/kg
Other information	
Product/substance	2-aminoethanol
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	1720 mg/kg
Other information	
Product/substance	2-aminoethanol
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	1025 mg/kg
Other information	

Harmful if swallowed.

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory sensitisation**

Product/substance	hexyl D-glucoside
Test method	
Species	Guinea pig
Result	No adverse effect observed (not sensitising)
Other information	

**Skin sensitisation**

Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	OECD 406
Species	Guinea pig
Result	No adverse effect observed (not sensitising)
Other information	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.2. Information on other hazards

#### Long term effects

**Irritation effects:** This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

**Neurotoxic effects:** This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### Endocrine disrupting properties

No special

#### Other information

2-butoxyethanol has been classified by IARC as a group 3 carcinogen.

## SECTION 12: Ecological information

### 12.1. Toxicity

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	>100 mg/L ·
Other information	
Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	EC50

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Result	130 mg/L ·
Other information	
Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	>100 mg/L ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	1474 mg/l ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	EC50
Result	1840 mg/l ·
Other information	
Product/substance	2-butoxyethanol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	1550 mg/l ·
Other information	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	2-(2-ethoxyethoxy)ethanol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	6010 mg/L ·
Other information	
Product/substance	potassium hydroxide
Test method	
Species	Fish
Compartment	
Duration	24 hours
Test	LC50
Result	80 mg/L ·
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	>100 mg/L ·
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	>100 mg/L ·
Other information	
Product/substance	hexyl D-glucoside
Test method	



According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Species	Algae
Compartment	
Duration	72 hours
Test	EC50
Result	>100 mg/L ·
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	NOEC
Result	>100 mg/L
Other information	
Product/substance	hexyl D-glucoside
Test method	
Species	Daphnia
Compartment	
Duration	21 days
Test	NOEC
Result	>1-10 mg/L
Other information	
Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	>1 mg/L
Other information	
Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	
Species	Daphnia
Compartment	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Duration	48 hours
Test	EC50
Result	>1 mg/L
Other information	
Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	EC50
Result	>1 mg/L
Other information	
Product/substance	2-aminoethanol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	125 mg/L
Other information	
Product/substance	2-aminoethanol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	65 mg/L
Other information	
Product/substance	2-aminoethanol
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	EC50

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Result	2,5 mg/L
Other information	

### 12.2. Persistence and degradability

Product/substance	1-butylpyrrolidin-2-one
Biodegradable	Yes
Test method	
Result	
Product/substance	2-butoxyethanol
Biodegradable	Yes
Test method	OECD 301 B
Result	90%
Product/substance	2-(2-ethoxyethoxy)ethanol
Biodegradable	Yes
Test method	Oxygen consumption
Result	79,4%
Product/substance	potassium hydroxide
Biodegradable	Yes
Test method	
Result	
Product/substance	hexyl D-glucoside
Biodegradable	Yes
Test method	OECD 301 D
Result	>70%
Product/substance	Alcohols, C9-C11, Ethoxylated
Biodegradable	Yes
Test method	OECD 301 D
Result	
Product/substance	2-aminoethanol
Biodegradable	Yes
Test method	
Result	

### 12.3. Bioaccumulative potential

Product/substance	1-butylpyrrolidin-2-one
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According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	
Product/substance	2-butoxyethanol
Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	
Product/substance	2-(2-ethoxyethoxy)ethanol
Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	
Product/substance	potassium hydroxide
Test method	
Potential bioaccumulation	No
LogPow	-1,3800
BCF	No data available
Other information	
Product/substance	hexyl D-glucoside
Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	
Product/substance	Alcohols, C9-C11, Ethoxylated
Test method	
Potential bioaccumulation	No

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

LogPow	No data available
BCF	No data available
Other information	
Product/substance	2-aminoethanol
Test method	
Potential bioaccumulation	No
LogPow	-1,91
BCF	No data available
Other information	

#### 12.4. Mobility in soil

No data available

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

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

#### 12.6. Endocrine disrupting properties

No special

#### 12.7. Other adverse effects

No special

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 6 - Acute toxicity

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

#### EWC code

20 01 13\* Solvents

#### Specific labelling

Not applicable

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

### SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

#### Additional information

Not dangerous goods according to ADR, IATA and IMDG.

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

#### 14.6. Special precautions for user

Not applicable

#### 14.7. Maritime transport in bulk according to IMO instruments

No data available

### SECTION 15: Regulatory information

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

##### Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

##### Demands for specific education

No specific requirements

##### SEVESO - Categories / dangerous substances

Not applicable

##### Additional information

Not applicable

##### Sources

The Health and Safety at Work etc. Act 1974 Regulations 2013.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

CLP Regulation (EC) No 1272/2008, as retained and amended in UK law.

EC-Regulation 1907/2006 (REACH), as amended by UK REACH Regulations SI 2019/758

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.

H312, Harmful in contact with skin.

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.

H319, Causes serious eye irritation.

H332, Harmful if inhaled.

H336, May cause drowsiness or dizziness.

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SCL = A specific concentration limit  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TWA = Time weighted average  
UN = United Nations  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

#### ▼ The safety data sheet is validated by

MÅ

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en