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Spilsby Road • Harold Hill • Romford • RM3 8SB • **T** 020 8501 6730 • **E** [info@wfa.uk.net](mailto:info@wfa.uk.net) • **W** [www.wfa.uk.net](http://www.wfa.uk.net)

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# FRICTION FLOOR LACQUER PRODUCT INFORMATION



## GENERAL DESCRIPTION

A slip resistant two-component non-yellowing water-based 100 % polyurethane lacquer. Fast curing and ideal for use in high traffic areas where slip resistance is important, eg. restaurants and bars. Friction Floor Lacquer is tested to BS5796-2.

The lacquer is not recommended for sport purposes with player contact without use of mats.

Friction Floor Lacquer must be used as the final coat only and must be mixed with Hardener 1.0 before use.

Friction Floor Lacquer has received the Danish Indoor Climate Labelling. A product with this labelling has undergone extensive volatile emission and odour tests. This ensures that there are no chemical substances in the product which adversely affect the air quality in the room.

For professional use.

## PRODUCT DESCRIPTION

**Product:** Two-component water-based polyurethane lacquer.

**Package sizes:** 4.95 (4.5+0.45) litres in ultra matt.

**Appearance:** Creamy/milky in the container. Colourless film when dry.

## TECHNICAL DATA

**Coverage:** 10-12 m<sup>2</sup> per litre.

**Mixing:** 10 parts of lacquer to 1 part of hardener.

### Before application:

Stir/shake the lacquer thoroughly until any settled product has been stirred/shaken in.

Add hardener and stir/shake the lacquer thoroughly again, minimum 45 seconds.

After adding hardener leave for 10 minutes.

Stir/shake the lacquer again prior to use, minimum 45 seconds.

**Pot-life:** The mixture should be used within 2 hours. Avoid reuse of mixed material beyond this time.

**Application tools:** Brush, short haired mohair roller, air/airless spray, applicator. Apply the lacquer to the floor sparingly and evenly, rolling out the lacquer promptly so as to avoid gluing the boards together.

**Substrate temperature:** 15-25 °C.

**Dilution:** Maximum 15 % dilution with water by spray application.

**Drying time at 20 °C and 50 % RH:**

Approx. 3 hours.

Ready for light traffic: 8 hours.

Fully cured after 72 hours.

Apply only 2 coats of lacquer per day.

**RH:** Water-based products have a certain gluing effect and are therefore only recommended to be used in rooms with a stable humidity. This means that the difference between the highest and lowest relative humidity should not fluctuate more than 30 % over the year.

**Cleaning of tools:** Soap and water before the lacquer dries. Rollers might still contain small particles after cleaning. Therefore, the roller can only be reused for Friction Floor Lacquer.

**Storage:** Lasts for 1 year if unopened and stored at 20 °C. Not to be exposed to temperatures below 5 °C.

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## SYSTEM RECOMMENDATIONS

**Commercial areas or sport areas without player contact:**

1 coat WB Primer 8 m<sup>2</sup>/litre or 1 coat SB Primer 10 m<sup>2</sup>/litre

+ 1-2 coats HT700 Floor Lacquer or HP800 Sport 10-12 m<sup>2</sup>/litre

+ 1 coat Friction Floor Lacquer 10-12 m<sup>2</sup>/litre.

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## DIRECTIONS FOR USE

**Untreated/sanded floors:**

Ensure that the surface is absolutely clean, dry and free from dust, wax, grease, polish, soap residues etc. Sand the surface to remove dirt and irregularities. Vacuum thoroughly and wipe off with a cloth well wrung in clean water.

- Apply one coat of Junckers WB Primer or Junckers SB Primer. Leave to dry.
- Sand with sandpaper grit 150-180 along the fibres of the wood.
- Vacuum sanding dust and wipe off with a cloth well wrung in clean water.
- Apply 1 coat of Junckers HT700 Floor Lacquer or Junckers HP800 Sport and leave to dry overnight.
- If extra wear resistance is wanted, apply a third coat of lacquer using one of the types mentioned above.
- Alternatively, directly to 1 coat of Friction Floor Lacquer as final treatment.
- Adhesion properties are optimized if the surface is sanded with sandpaper grit 150-180 before the third coat of lacquer. If the final coat of lacquer is applied after more than 24 hours, sanding must always be carried out.

**Previously sealed floors:**

- Wash with Junckers Neutralizer.
- Sand thoroughly using sandpaper grit 150-180.
- Vacuum sanding dust and wipe off with a cloth well wrung in clean water.
- Apply one coat of Friction Floor Lacquer and leave to dry.
- Before lacquering the full area, it is recommended to conduct a trial application on a smaller area.

**How to conduct a trial application:**

Lacquer a couple of spots, 2 coats at 4 hours interval. After drying for 24 hours check the spots for adhesion by scraping with the edge of a coin. If the adhesion is functioning and the appearance of the surface is acceptable, the floor can be lacquered. If the result is not acceptable, continue as described under "Wax/polish treated floors".

**Wax/polish treated floors:**

- Machine sand before lacquering. Use sandpaper grit 24-36 to strip old coats.
- Then remove abrasion marks with sandpaper grit 60-80.
- Finally, use sandpaper grit 120-150 to obtain a completely smooth surface.
- Vacuum sanding dust carefully.
- Then seal the floor as described under "Untreated/sanded floors".

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## PRECAUTIONARY MEASURES

Before using the product, read the label on the container carefully and observe the recommended precautionary measures. See Safety Data Sheet for detailed information.

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## FURTHER INFORMATION

**Products:**

- F 5.3 - Junckers WB Primer
- F 6.4 - Junckers SB Primer
- F 8.2 - Junckers HP800 Sport
- F 8.5 - Junckers HT700 Floor Lacquer
- F 10.3 - Junckers Neutralizer

## SAFETY DATA SHEET

## FRICTION FLOOR LACQUER

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

## 1.1. Product identifier

## Trade name

FRICTION FLOOR LACQUER

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

## ▼ Relevant identified uses of the substance or mixture

Lacquering of wooden floors.

Restricted to professional users.

## Uses advised against

None known.

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

## Company and address

**Junckers Industrier A/S**

Vaerftsvej 4

4600 Koege

Denmark

Tel. +45 70 80 30 00

## Importer

**Junckers Ltd.**

Warren Park, 5 Warren Yard, Wolverton Mill

Milton Keynes MK12 5NW

Tel. 0 1376 534 700

## E-mail

productsafety@junckers.dk

## Revision

25/09/2023

## SDS Version

4.0

## Date of previous version

10/07/2023 (3.0)

## 1.4. Emergency telephone number

National Poisons Information Service (NPIS): Call 111 (24 h service).

See section 4 for first aid measures.

## SECTION 2: Hazards identification

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

## 2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

## 2.2. Label elements

## Hazard pictogram(s)

Not applicable.

## Signal word

Not applicable.

## Hazard statement(s)

Not applicable.

## Precautionary statement(s)

General

-

Prevention

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

-  
Response

-  
Storage

-  
Disposal

#### Hazardous substances

None known.

#### Additional labelling

EUH208, Contains 1,2-Benzisothiazol-3(2H)-one (BIT), 5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1)). May produce an allergic reaction.  
EUH210, Safety data sheet available on request.

#### VOC

VOC content: ≤ 65 g/L  
MAXIMUM VOC CONTENT (Phase II, category A/i (WB): 140 g/L  
VOC content for product mixed with hardener: ≤ 95 g/L  
MAXIMUM VOC CONTENT (Phase II, category A/j (WB): 140 g/L)

### 2.3. Other hazards

#### Additional warnings

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

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2-(2-Butoxyethoxy)ethanol	CAS No.: 112-34-5 EC No.: 203-961-6 UK-REACH: Index No.: 603-096-00-8	3-5%	Eye Irrit. 2, H319	[1], [3]
2-Dimethylaminoethanol	CAS No.: 108-01-0 EC No.: 203-542-8 UK-REACH: Index No.: 603-047-00-0	<1%	Flam. Liq. 3, H226 Acute Tox. 4, H302 (ATE: 1187.00 mg/kg) Acute Tox. 4, H312 (ATE: 1219.00 mg/kg) Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 3, H331 (ATE: 6.00 mg/L) STOT SE 3, H335 (SCL: 5.00 %)	
1,2-Benzisothiazol-3(2H)-one (BIT)	CAS No.: 2634-33-5 EC No.: 220-120-9 UK-REACH: Index No.: 613-088-00-6	<0,03%	Acute Tox. 4, H302 (ATE: 490.00 mg/kg) Skin Irrit. 2, H315 Skin Sens. 1, H317 (SCL: 0.05 %) Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	
5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))	CAS No.: 55965-84-9 EC No.: 911-418-6 UK-REACH: Index No.: 613-167-00-5	<0,0015%	EUH071 Acute Tox. 3, H301 (ATE: 64.00 mg/kg) Acute Tox. 2, H310 (ATE: 87.00 mg/kg) Skin Corr. 1C, H314 (SCL: 0.60 %) Skin Irrit. 2, H315 (SCL: 0.06 %) Skin Sens. 1A, H317 (SCL: 0.0015 %) Eye Dam. 1, H318 (SCL: 0.60 %) Eye Irrit. 2, H319 (SCL: 0.06 %) Acute Tox. 2, H330	

Aquatic Acute 1, H400 (M=100)  
Aquatic Chronic 1, H410 (M=100)

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.

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

### 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

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

##### Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

##### Burns

Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

Treat symptomatically.

#### 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:

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

#### 5.3. Advice for firefighters

Fire fighters should wear appropriate personal protective equipment.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

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

Use sand, sawdust, soil, vermiculite or similar to collect liquid material. Subsequently, place in a suitable waste container.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on 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

> 5 °C

#### 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-(2-Butoxyethoxy)ethanol

Long term exposure limit (8 hours) (ppm): 10

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 67.5

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

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 101.2

#### 2-Dimethylaminoethanol

Long term exposure limit (8 hours) (ppm): 2

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 7.4

Short term exposure limit (15 minutes) (ppm): 6

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 22

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

#### 1,2-Benzisothiazol-3(2H)-one (BIT)

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	0,345 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	0,966 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	1,2 mg/m <sup>3</sup>



According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Long term – Systemic effects - Workers	Inhalation	6,81 mg/m <sup>3</sup>
<b>2-(2-Butoxyethoxy)ethanol</b>		
<b>Duration:</b>	<b>Route of exposure:</b>	<b>DNEL:</b>
Long term – Local effects - Workers	Inhalation	67,5 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	101,2 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	6,25 mg/kg bw/day
<b>2-Dimethylaminoethanol</b>		
<b>Duration:</b>	<b>Route of exposure:</b>	<b>DNEL:</b>
Long term – Local effects - Workers	Dermal	100 µg/cm <sup>2</sup>
Long term – Systemic effects - Workers	Dermal	0,25 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	1,2 mg/kg bw/day
Long term – Local effects - Workers	Inhalation	1,76 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Inhalation	0,438 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	1,76 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	13,53 mg/m <sup>3</sup>
Short term – Systemic effects - Workers	Inhalation	5,28 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	0,148 mg/kg bw/day
<b>5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))</b>		
<b>Duration:</b>	<b>Route of exposure:</b>	<b>DNEL:</b>
Long term – Local effects - General population	Inhalation	0,02 mg/m <sup>3</sup>
Long term – Local effects - Workers	Inhalation	0,02 mg/m <sup>3</sup>
Short term – Local effects - General population	Inhalation	0,04 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	0,04 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	0,09 mg/kg bw/day
Short term – Systemic effects - General population	Oral	0,11 mg/kg bw/day
<b>PNEC</b>		
<b>1,2-Benzisothiazol-3(2H)-one (BIT)</b>		
<b>Route of exposure:</b>	<b>Duration of Exposure:</b>	<b>PNEC:</b>
Freshwater		4,03 µg/l
Freshwater sediment		49,9 µg/kg dw
Intermittent release (freshwater)		1,1 µg/l
Intermittent release (marine water)		0,11 µg/l
Marine water		0,403 µg/l
Marine water sediment		4,99 µg/kg dw
Sewage treatment plant		1,03 mg/l
Soil		3 mg/kg dw
<b>2-(2-Butoxyethoxy)ethanol</b>		
<b>Route of exposure:</b>	<b>Duration of Exposure:</b>	<b>PNEC:</b>
Freshwater		1,1 mg/l
Freshwater sediment		4,4 mg/kg dw
Intermittent release (freshwater)		11 mg/l
Marine water		0,11 mg/l
Marine water sediment		0,44 mg/kg dw
Predators		56 mg/kg

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Soil		0,32 mg/kg dw
<b>2-Dimethylaminoethanol</b>		
<b>Route of exposure:</b>	<b>Duration of Exposure:</b>	<b>PNEC:</b>
Freshwater		0,066 mg/l
Freshwater sediment		0,246 mg/kg dw
Intermittent release (freshwater)		0,661 mg/l
Marine water		0,004 mg/l
Marine water sediment		0,015 mg/kg dw
Sewage treatment plant		10 mg/l
Soil		0,01 mg/kg dw
<b>5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))</b>		
<b>Route of exposure:</b>	<b>Duration of Exposure:</b>	<b>PNEC:</b>
Freshwater		3,39 µg/l
Freshwater sediment		0,027 mg/kg dw
Intermittent release (freshwater)		3,39 µg/l
Intermittent release (marine water)		3,39 µg/l
Marine water		3,39 µg/l
Marine water sediment		0,027 mg/kg dw
Sewage treatment plant		0,23 mg/l
Soil		0,01 mg/kg dw

## 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 eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

### Measures to avoid environmental exposure



No specific requirements.

## Individual protection measures, such as personal protective equipment

### Generally

Use only UKCA marked protective equipment.

### Respiratory Equipment


Work situation	Type	Class	Colour	Standards	
	Gas filter A	2 (medium capacity)	Brown	EN14387	
In case of spray application	Self contained breathing apparatus			EN137, EN139	

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577


#### Skin protection

Work situation	Recommended	Type/Category	Standards	
	Dedicated work clothing should be worn	-	-	
In case of spray application	Protective suit with hood	-	-	

#### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,4	> 480	EN374-2, EN374-3, EN388	

#### Eye protection

Type	Standards	
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

Whitish

#### Odour / Odour threshold

Faint

#### pH

8-9

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

1,04

#### Kinematic viscosity

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

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

Does not apply to liquids.

##### Boiling point (°C)

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

##### Vapour pressure

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

##### Relative vapour density

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

##### Decomposition temperature (°C)

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

#### Data on fire and explosion hazards

##### Flash point (°C)

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

##### Flammability (°C)

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

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

**Auto-ignition temperature (°C)**

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

**Lower and upper explosion limit (% v/v)**

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

**Solubility**

**Solubility in water**

Soluble

**n-octanol/water coefficient**

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

**Solubility in fat (g/L)**

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

**9.2. Other information**

**VOC (g/l)**

≤ 65

Mixed with hardener:

≤ 95

**Oxidizing properties**

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

**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**

None known.

**10.4. Conditions to avoid**

None known.

**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 as retained and amended in UK law**

**Acute toxicity**

Product/substance	2-Dimethylaminoethanol
Test method:	OECD 401
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	1187 mg/kg

Product/substance	2-Dimethylaminoethanol
Test method:	OECD 402
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	1219 mg/kg

Product/substance	2-Dimethylaminoethanol
Test method:	OECD 403
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Result:	6 mg/l
Product/substance	1,2-Benzisothiazol-3(2H)-one (BIT)
Test method:	OECD 401
Species:	Rat, Wistar, male/female
Route of exposure:	Oral
Test:	LD50
Result:	490 mg/kg
Product/substance	5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))
Species:	Rat, Charles River CD, male
Route of exposure:	Oral
Test:	LD50
Result:	64 mg/kg
Product/substance	5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))
Species:	Rabbit, Albino, male
Route of exposure:	Dermal
Test:	LD50
Result:	87 mg/kg
Product/substance	5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))
Test method:	OECD 403
Species:	Rat, Sprague-Dawley, male/female
Route of exposure:	Inhalation
Test:	LC50
Result:	0,17 mg/l

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

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

#### Respiratory sensitisation

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

#### Skin sensitisation

This product contains substances that may trigger an allergic reaction in already sensitized persons.

#### 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

None known.

#### Endocrine disrupting properties

Not applicable.

#### Other information

None known.

## SECTION 12: Ecological information

### 12.1. Toxicity

Product/substance	1,2-Benzisothiazol-3(2H)-one (BIT)
Test method:	OECD 201
Species:	Selenastrum capricornutum

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Duration:	72 hours
Test:	ErC50
Result:	0,11 mg/l

Product/substance	1,2-Benzisothiazol-3(2H)-one (BIT)
Species:	Selenastrum capricornutum
Duration:	72 hours
Test:	NOErC
Result:	0,0403 mg/l

### 12.2. Persistence and degradability

Product/substance	2-(2-Butoxyethoxy)ethanol
Biodegradable:	Yes
Test method:	OECD 301 C
Result:	95 %

Product/substance	2-Dimethylaminoethanol
Biodegradable:	Yes
Test method:	OECD 301 C
Result:	> 60 %

Product/substance	5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))
Biodegradable:	Yes
Test method:	OECD 301 B
Result:	62 %

### 12.3. Bioaccumulative potential

Product/substance	2-(2-Butoxyethoxy)ethanol
Test method:	
Potential bioaccumulation:	No
LogPow:	1
BCF:	No data available.
Other information:	

Product/substance	2-Dimethylaminoethanol
Test method:	
Potential bioaccumulation:	No
LogPow:	-0,55
BCF:	3,162
Other information:	

Product/substance	1,2-Benzisothiazol-3(2H)-one (BIT)
Test method:	
Potential bioaccumulation:	No
LogPow:	0,7
BCF:	6,62
Other information:	

Product/substance	5-Chloro-2-methyl-2H-isothiazol-3-one/2-Methyl-2H-isothiazol-3-one (3:1) (CMIT/MIT (3:1))
Test method:	
Potential bioaccumulation:	No
LogPow:	0,75
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

Not applicable.

### 12.7. Other adverse effects

None known.

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

## SECTION 13: Disposal considerations

### Waste treatment methods

Product is not covered by regulations on dangerous waste.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### EWC code

08 01 12 Waste paint and varnish other than those mentioned in 08 01 11

### Specific labelling

### 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.

### 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.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

Not applicable.

#### ▼ UK-REACH, Annex XVII

2-(2-Butoxyethoxy)ethanol is subject to restrictions, UK-REACH annex XVII (entry 55).

#### Additional information

Not applicable.

#### Sources

2012 No. 1715 ENVIRONMENTAL PROTECTION: The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No

## SECTION 16: Other information

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

,

EUH071, Corrosive to the respiratory tract.  
H226, Flammable liquid and vapour.  
H301, Toxic if swallowed.  
H302, Harmful if swallowed.  
H310, Fatal in contact with skin.  
H312, Harmful in contact with skin.  
H314, Causes severe skin burns and eye damage.  
H315, Causes skin irritation.  
H317, May cause an allergic skin reaction.  
H318, Causes serious eye damage.  
H319, Causes serious eye irritation.  
H330, Fatal if inhaled.  
H331, Toxic if inhaled.  
H335, May cause respiratory irritation.  
H400, Very toxic to aquatic life.  
H410, Very toxic to aquatic life with long lasting effects.  
H411, Toxic to aquatic life with long lasting effects.

#### 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 = 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  
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  
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 = 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  
UVCB = Substances of Unknown or Variable composition, Complex reaction products or Biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and very Bioaccumulative

#### Additional information

Not applicable.

▼ The safety data sheet is validated by

ULS

#### 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



According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

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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

## SAFETY DATA SHEET

## HARDENER 1.0

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

## 1.1. Product identifier

## Trade name

HARDENER 1.0

## Unique formula identifier (UFI)

35Q2-E0P7-U001-3CWP

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

## ▼ Relevant identified uses of the substance or mixture

Hardener for 2-component surface treatment of floors.  
Restricted to professional users.

## Uses advised against

None known.

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

## Company and address

**Junckers Industrier A/S**

Vaerftsvej 4  
4600 Koege  
Denmark  
Tel. +45 70 80 30 00

## ▼ Importer

**Junckers Ltd.**

Warren Park, 5 Warren Yard, Wolverton Mill  
Milton Keynes MK12 5NW  
Tel. 0 1376 534 700

## E-mail

productsafety@junckers.dk

## Revision

28/08/2023

## SDS Version

4.0

## Date of previous version

23/03/2023 (4.0)

## 1.4. Emergency telephone number

National Poisons Information Service (NPIS): Call 111 (24 h service).

See section 4 for first aid measures.

## SECTION 2: Hazards identification

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

## 2.1. Classification of the substance or mixture

Skin Sens. 1; H317, May cause an allergic skin reaction.

Acute Tox. 4; H332, Harmful if inhaled.

STOT SE 3; H335, May cause respiratory irritation.

Aquatic Chronic 3; H412, Harmful to aquatic life with long lasting effects.

## 2.2. Label elements

## Hazard pictogram(s)



## Signal word

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and and SI 2020/1577

#### Warning

#### Hazard statement(s)

May cause an allergic skin reaction. (H317)  
 Harmful if inhaled. (H332)  
 May cause respiratory irritation. (H335)  
 Harmful to aquatic life with long lasting effects. (H412)

#### Precautionary statement(s)

##### General

-

##### Prevention

Wear eye protection/protective gloves/protective clothing. (P280)  
 Avoid breathing vapour. (P261)  
 Avoid release to the environment. (P273)

##### Response

If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)  
 Call a POISON CENTER/doctor if you feel unwell. (P312)

##### Storage

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)

##### Disposal

-

#### ▼ Hazardous substances

Hydrophilic, aliphatic polyisocyanate  
 Hexamethylene-1,6-di-isocyanate

#### Additional labelling

UFI: 35Q2-E0P7-U001-3CWP

### 2.3. Other hazards

#### Additional warnings

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

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Hydrophilic, aliphatic polyisocyanate	CAS No.: 160994-68-3 EC No.: UK-REACH: Index No.:	60-70%	Skin Sens. 1B, H317 Acute Tox. 4, H332 STOT SE 3, H335 Aquatic Chronic 3, H412	
Hexamethylene-1,6-di-isocyanate	CAS No.: 822-06-0 EC No.: 212-485-8 UK-REACH: Index No.: 615-011-00-1	<0.1%	Acute Tox. 4, H302 (ATE: 746.00 mg/kg) [3] Skin Irrit. 2, H315 Skin Sens. 1, H317 (SCL: 0.50 %) Eye Irrit. 2, H319 Acute Tox. 1, H330 (ATE: 0.124 mg/L) Resp. Sens. 1, H334 (SCL: 0.50 %) STOT SE 3, H335	

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

#### Other information

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

## 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 injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

##### 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

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

##### Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

##### Burns

Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

Call a POISON CENTER/doctor if you feel unwell.

If skin irritation or rash occurs: 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:

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.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

Contaminated areas may be slippery.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local

environmental authorities.

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

Use sand, sawdust, soil, vermiculite or similar to collect liquid material. Subsequently, place in a suitable waste container.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

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

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

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

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

Store in cool, dry conditions in well sealed receptacles.

#### 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

Hexamethylene-1,6-di-isocyanate

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0,02

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 0,07

Annotations:

Sen = Capable of causing occupational asthma.

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

Hexamethylene-1,6-di-isocyanate

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	0,035 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	0,07 mg/m <sup>3</sup>

#### PNEC

Hexamethylene-1,6-di-isocyanate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		8,42 mg/l

### 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.

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and and SI 2020/1577

#### ▼ 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 eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

#### Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.


#### Individual protection measures, such as personal protective equipment

##### Generally


Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (e.g. type A1 according to standard EN 14387) is used.

Use only UKCA marked protective equipment.


##### Respiratory Equipment

Type	Class	Colour	Standards	
Gas filter A	2 (medium capacity)	Brown	EN14387	


##### 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, EN374-3, EN388	

##### Eye protection

Type	Standards	
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

Colourless

#### Odour / Odour threshold

Faint

#### pH

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

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

1,06

#### Kinematic viscosity

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

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

Does not apply to liquids.

##### Boiling point (°C)

175

##### Vapour pressure

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

##### Relative vapour density

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

##### Decomposition temperature (°C)

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

#### Data on fire and explosion hazards

##### Flash point (°C)

61

##### Flammability (°C)

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

##### Auto-ignition temperature (°C)

300

##### Lower and upper explosion limit (% v/v)

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

#### Solubility

##### Solubility in water

Insoluble

##### n-octanol/water coefficient

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

##### Solubility in fat (g/L)

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

#### 9.2. Other information

##### Oxidizing properties

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

##### 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

None known.

#### 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 as retained and amended in UK law

##### ▼ Acute toxicity

Product/substance      Hexamethylene-1,6-di-isocyanate

Test method:            OECD 403

Species:                 Rat, Wistar, male/female

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and and SI 2020/1577

Route of exposure:	Inhalation
Test:	LC50
Result:	0,124 mg/l

Product/substance	Hexamethylene-1,6-di-isocyanate
Test method:	OECD 401
Species:	Rat, Albino, male
Route of exposure:	Oral
Test:	LD50
Result:	746 mg/kg

Harmful if inhaled.

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

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

#### Respiratory sensitisation

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

#### Skin sensitisation

May cause an allergic skin reaction.

#### 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

May cause respiratory irritation.

#### 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.

#### Endocrine disrupting properties

Not applicable.

#### Other information

None known.

## SECTION 12: Ecological information

### 12.1. ▼ Toxicity

Product/substance	Hydrophilic, aliphatic polyisocyanate
Test method:	OECD 203
Species:	Danio rerio
Duration:	96 hours
Test:	LC50
Result:	28,3 mg/l

Harmful to aquatic life with long lasting effects.

### 12.2. ▼ Persistence and degradability

Product/substance	Hydrophilic, aliphatic polyisocyanate
Biodegradable:	No
Test method:	OECD 301 F
Result:	2 %

Product/substance	Hexamethylene-1,6-di-isocyanate
Biodegradable:	No
Test method:	OECD 301 F
Result:	42 %



According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and and SI 2020/1577

### 12.3. Bioaccumulative potential

Product/substance Hexamethylene-1,6-di-isocyanate  
 Test method:  
 Potential bioaccumulation: No  
 LogPow: 3,2  
 BCF: 58  
 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

Not applicable.

### 12.7. Other adverse effects

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

## SECTION 13: Disposal considerations

### Waste treatment methods

Product is covered by the regulations on hazardous waste.  
 HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity  
 HP 6 - Acute toxicity  
 HP 13 - Sensitising  
 HP 14 - Ecotoxic  
 Dispose of contents/container to an approved waste disposal plant.  
 Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### EWC code

08 01 11\* Waste paint and varnish containing organic solvents or other dangerous substances

### ▼ Specific labelling

### 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.

### 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.

People under the age of 18 shall not be exposed to this product.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

Not applicable.

#### UK-REACH, Annex XVII

Hexamethylene-1,6-di-isocyanate is subject to restrictions, UK-REACH annex XVII (entry 74).

#### Additional information

Not applicable.

#### Sources

The Management of Health and Safety at Work Regulations 1999.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

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

H302, Harmful if swallowed.

H315, Causes skin irritation.

H317, May cause an allergic skin reaction.

H319, Causes serious eye irritation.

H330, Fatal if inhaled.

H332, Harmful if inhaled.

H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335, May cause respiratory irritation.

H412, Harmful to aquatic life with long lasting effects.

#### 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 = CLP-specific hazard statement

EWG = European Waste Catalogue

GHS = Globally Harmonized System of classification and labelling of chemicals

IARC = International Agency for Research on Cancer

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

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 = 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

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and and SI 2020/1577

UN = United Nations

UVCB = Substances of Unknown or Variable composition, Complex reaction products or Biological materials

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) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

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

ULS

#### 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