

## SAFETY DATA SHEET

## FOT Combustion Catalyst

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

## 1.1. Product identifier

## Trade name

FOT Combustion Catalyst

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

## Relevant identified uses of the substance or mixture

No special

## Uses advised against

No special

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

## Company and address

**Vecom Marine B.V.**

Mozartlaan 3

3144 NA Maassluis

The Netherlands

+31 (0) 10-5930210

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<https://vecom-marine.com>

## Contact person

Vecom Marine B.V.

## E-mail

[sales@vecom-marine.com](mailto:sales@vecom-marine.com)

## Revision

11/04/2022

## SDS Version

2.0

## Date of previous version

11/04/2022 (2.0)

## 1.4. Emergency telephone number

National Poisons Information Centre (NVIC): +31 (0)88-755-8000 (24 hour service)

Only intended to inform professional emergency services in case of acute poisoning.

See section 4 on first aid measures.

## SECTION 2: Hazards identification

## 2.1. Classification of the substance or mixture

Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.

Skin Irrit. 2; H315, Causes skin irritation.

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

Acute Tox. 4; H332, Harmful if inhaled.

Carc. 2; H351, Suspected of causing cancer.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2; H411, Toxic to aquatic life with long lasting effects.

## 2.2. Label elements

## Hazard pictogram(s)



#### Signal word

Danger

#### Hazard statement(s)

May be fatal if swallowed and enters airways. (H304)  
 Causes skin irritation. (H315)  
 Causes serious eye irritation. (H319)  
 Harmful if inhaled. (H332)  
 Suspected of causing cancer. (H351)  
 May cause damage to organs through prolonged or repeated exposure. (H373)  
 Toxic to aquatic life with long lasting effects. (H411)

#### Safety statement(s)

##### General

-

##### Prevention

Do not breathe vapour/mist. (P260)  
 Obtain special instructions before use. (P201)  
 Wear eye protection/protective gloves/protective clothing. (P280)

##### Response

Get medical advice/attention if you feel unwell. (P314)  
 IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310)

##### Storage

-

##### Disposal

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

#### Hazardous substances

Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]

Renewable hydrocarbons (diesel type fraction)  
 C8-C26 branched and linear hydrocarbons – Distillates  
 2-ethylhexanoic acid, manganese salt

#### 2.3. Other hazards

##### Additional labelling

Not applicable

##### 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
Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of	CAS No.: 68334-30-5 EC No.: 269-822-7 REACH: Index No.: 649-224-00-6	40-60%	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Acute Tox. 4, H332 Carc. 2, H351 STOT RE 2, H373 Aquatic Chronic 2, H411	

approximately 163 °C to 357 °C  
(325 °F to 675 °F).]

Renewable hydrocarbons (diesel type fraction)	CAS No.: 928771-01-1 EC No.: 618-882-6 REACH: Index No.:	15-25%	EUH066 Asp. Tox. 1, H304	
C8-C26 branched and linear hydrocarbons – Distillates	CAS No.: 848301-67-7 EC No.: 481-740-5 REACH: 01-0000020118-77- XXXX Index No.:	15-25%	EUH066 Asp. Tox. 1, H304	
Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)	CAS No.: 68155-07-7 EC No.: 268-935-9 REACH: Index No.:	1-3%	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	
2-ethylhexanoic acid, manganese salt	CAS No.: 15956-58-8 EC No.: 240-085-3 REACH: 01-2119979087-23- XXXX Index No.:	1-3%	EUH066 Eye Irrit. 2, H319 Acute Tox. 4, H332 Repr. 2, H361 STOT RE 2, H373 Aquatic Chronic 2, H411	
2-butoxyethanol;2- butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve	CAS No.: 111-76-2 EC No.: 203-905-0 REACH: 01-2119475108-36- XXXX Index No.: 603-014-00-0	1-3%	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332	[1]
(2- methoxymethylethoxy)propanol (Dowanol DPM)	CAS No.: 34590-94-8 EC No.: 252-104-2 REACH: 01-2119450011-60- XXXX Index No.:	<1%		[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 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

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. 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

IF SWALLOWED: Immediately call a POISON CENTER / doctor.

Do not induce vomiting! If vomiting occurs, keep head facing down so that vomit does not get into the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should therefore be kept under medical attention for at least 48 hours.

### Burns

Not applicable

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

This product contains substances that can cause chemical pneumonia if swallowed. Symptoms of chemical pneumonia may appear after several hours.

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.

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

IF exposed or concerned:

Get immediate 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.  
 Avoid inhalation of vapours from spilled material.

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

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

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

Avoid direct contact with the product.

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

Dry, cool and well ventilated

##### 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;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve

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

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 100

Annotations:

H = Special risk of dermal absorption.

—  
 (2-methoxymethylethoxy)propanol (Dowanol DPM)

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 300

Annex XIII of the Working Conditions Regulation, List of legal limit values.

#### DNEL

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	4300 mg/m <sup>3</sup> /15 min
Route of exposure	Inhalation

Duration	Short term – Systemic effects - Workers
Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	2.9 mg/kg 8h
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	68 mg/m <sup>3</sup> /8h
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	2600 mg/m <sup>3</sup> /15 min
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	1.3 mg/kg 24h
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
DNEL	20 mg/m <sup>3</sup> /24h
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	4.16 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	73.4 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	0.0936 mg/cm <sup>2</sup>
Route of exposure	Dermal

Duration	Long term – Local effects - Workers
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	2.5 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	21.73 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	6.25 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
DNEL	0.056 mg/cm <sup>2</sup>
Route of exposure	Dermal
Duration	Long term – Local effects - General population
Product/substance	2-ethylhexanoic acid, manganese salt
DNEL	1.19 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-ethylhexanoic acid, manganese salt
DNEL	5.91 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	2-ethylhexanoic acid, manganese salt
DNEL	0.26 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-ethylhexanoic acid, manganese salt
DNEL	2.96 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	2-ethylhexanoic acid, manganese salt
DNEL	4.1 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	89 mg/kg/d
Route of exposure	Dermal
Duration	Short term – Systemic effects - Workers

Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	1091 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Systemic effects - Workers
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	246 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Local effects - Workers
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	125 mg/kg/d
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	98 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	89 mg/kg/d
Route of exposure	Dermal
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	426 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	26.7 mg/kg/d
Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	147 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Local effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	75 mg/kg/d
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population



Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	59 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
DNEL	6.3 mg/kg/d
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
DNEL	308 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
DNEL	65 mg/kg lg/dag
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
DNEL	37.2 mg/m <sup>3</sup>
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
DNEL	15 mg/kg lg/dag
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
DNEL	1.67 mg/kg lg/dag
Route of exposure	Oral
Duration	Long term – Systemic effects - General population

## PNEC

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
PNEC	0.007 mg/l
Route of exposure	Freshwater
Duration of Exposure	
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
PNEC	0.0007 mg/l
Route of exposure	Marine water
Duration of Exposure	
Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
PNEC	0.024 mg/l
Route of exposure	Intermittent release

Duration of Exposure

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 PNEC 830 mg/l  
 Route of exposure Sewage treatment plant  
 Duration of Exposure

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 PNEC 0.195 mg/kg  
 Route of exposure Freshwater sediment  
 Duration of Exposure

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 PNEC 0.0195 mg/kg  
 Route of exposure Marine water sediment  
 Duration of Exposure

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 PNEC 0.0348 mg/kg  
 Route of exposure Soil  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 PNEC 8.8 mg/l  
 Route of exposure Freshwater  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 PNEC 0.88 mg/l  
 Route of exposure Marine water  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 PNEC 463 mg/l  
 Route of exposure Sewage treatment plant  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 PNEC 34.6 mg/kg TG  
 Route of exposure Freshwater sediment  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 PNEC 3.46 mg/kg TG  
 Route of exposure Marine water sediment  
 Duration of Exposure

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl

PNEC	ether;butyl cellosolve 2.33 mg/kg TG
Route of exposure	Soil
Duration of Exposure	
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
PNEC	26.4 mg/l
Route of exposure	Intermittent release
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	19 mg/l
Route of exposure	Freshwater
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	1.9 mg/l
Route of exposure	Marine water
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	190 mg/l
Route of exposure	Intermittent release
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	4168 mg/l
Route of exposure	Sewage treatment plant
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	70.2 mg/kg d.w.
Route of exposure	Freshwater sediment
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	7.02 mg/kg d.w.
Route of exposure	Marine water sediment
Duration of Exposure	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
PNEC	2.74 mg/kg d.w.
Route of exposure	Soil
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

Do not recirculate outlet air that contain the substances.

#### Hygiene measures

Take off contaminated clothing and wash it before reuse.

#### 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

Use only CE marked protective equipment.


##### Respiratory Equipment

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation	-	-	-	
A	Class 1 (low capacity)	Brown	EN14387	


##### Skin protection

Recommended	Type/Category	Standards	
Wear appropriate protection clothing, e.g. coveralls in polypropylene or working clothes in cotton or polyester.	-	-	

##### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0.4	> 480	EN374-2, EN374-3, EN388	

##### Eye protection

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

Deep brown

#### Odour / Odour threshold

Aromatic

#### pH

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

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

0.83 (20 °C)

#### Relative density

0.83 (20 °C)

#### Kinematic viscosity

0.07 cm<sup>2</sup>/s (40 °C)

#### 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)

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

##### 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)

65

##### 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

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

##### 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

##### 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

No special

#### 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	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	5000 mg/kg
Other information	

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50 (4 hours)
Result	>1 - <=5 mg/L
Other information	

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	>2000 mg/kg
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	>5000 mg/kg
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	>2000 mg/kg
Other information	

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Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method  
 Species Rat  
 Route of exposure Oral  
 Test LD50  
 Result 2150 mg/kg  
 Other information

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Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method  
 Species Rat  
 Route of exposure Inhalation  
 Test LC50 (4 hours)  
 Result >4.45 mg/L  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Rat  
 Route of exposure Oral  
 Test LD50  
 Result >300 - 2000 mg/kg  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Guinea pig  
 Route of exposure Oral  
 Test LD50  
 Result 1400 mg/kg  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Rat  
 Route of exposure Dermal  
 Test LD50  
 Result >2000 mg/kg  
 Other information

---

Product/substance (2-methoxymethylethoxy)propanol (Dowanol DPM)  
 Test method  
 Species Rat  
 Route of exposure Oral  
 Test LD50  
 Result >5000 mg/kg  
 Other information

---

Product/substance (2-methoxymethylethoxy)propanol (Dowanol DPM)  
 Test method

Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	9510 mg/kg
Other information	

Harmful if inhaled.

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/irritation

Causes serious eye irritation.

#### Respiratory sensitisation

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

#### Skin sensitisation

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

#### Germ cell mutagenicity

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

#### Carcinogenicity

Suspected of causing cancer.

#### 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

May cause damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

May be fatal if swallowed and enters airways.

### 11.2. Information on other hazards

#### Long term effects

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

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

No special

#### Other information

2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve has been classified by IARC as a group 3 carcinogen.

## SECTION 12: Ecological information

### 12.1. Toxicity

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Fish
Compartment	
Duration	No data available.
Test	LL50
Result	>1 -<=10 mg/L



Other information

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Crustacean
Compartment	
Duration	No data available.
Test	LL50
Result	>1 -<=10 mg/L
Other information	

Product/substance	Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).]
Test method	
Species	Algae
Compartment	
Duration	No data available.
Test	LL50
Result	>1 -<=10 mg/L
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	>1 - 10 mg/L
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Test method	
Species	Fish
Compartment	
Duration	28 days
Test	NOEC
Result	0.32 mg/L
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	>1 - 10 mg/L
Other information	

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
-------------------	--

Test method  
 Species Daphnia  
 Compartment  
 Duration 21 days  
 Test NOEC  
 Result 0.07 mg/L  
 Other information

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 Test method  
 Species Algae  
 Compartment  
 Duration 72 hours  
 Test EC50  
 Result >1 - 10 mg/L  
 Other information

Product/substance Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)  
 Test method  
 Species Bacteria  
 Compartment  
 Duration 16 hours  
 Test EC10  
 Result 0.83 mg/L  
 Other information

Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method OECD 203  
 Species Fish, Oryzias latipes  
 Compartment Freshwater  
 Duration 96 hours  
 Test LC50  
 Result >100 mg/L  
 Other information

Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method  
 Species Daphnia  
 Compartment Freshwater  
 Duration 96 hours  
 Test LC50  
 Result 3 mg/L  
 Other information

Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method  
 Species Fish  
 Compartment  
 Duration 120 days  
 Test NOEC  
 Result 0.6 mg/L  
 Other information

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Product/substance 2-ethylhexanoic acid, manganese salt  
 Test method  
 Species Daphnia  
 Compartment  
 Duration  
 Test NOEC  
 Result 25 mg/L  
 Other information

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Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Fish  
 Compartment  
 Duration 96 hours  
 Test LC50  
 Result 1464 mg/L  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Fish  
 Compartment  
 Duration 21 days  
 Test NOEC  
 Result >100 mg/L  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Daphnia  
 Compartment  
 Duration 48 hours  
 Test EC50  
 Result 1550 mg/L  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Daphnia  
 Compartment  
 Duration 21 days  
 Test NOEC  
 Result 100 mg/L  
 Other information

---

Product/substance 2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve  
 Test method  
 Species Algae

---

Compartment	
Duration	72 hours
Test	EbC50
Result	911 mg/L
Other information	
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
Test method	
Species	Bacteria
Compartment	
Duration	16 hours
Test	EC 3
Result	>700 mg/L
Other information	
Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
Test method	
Species	Bacteria
Compartment	
Duration	48 hours
Test	EC 5
Result	463 mg/L
Other information	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	10000 mg/L
Other information	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	1919 mg/L
Other information	
Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	969 mg/L
Other information	

Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	NOEC
Result	>969 mg/L
Other information	

Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Bacteria
Compartment	
Duration	18 hours
Test	EC10
Result	4168 mg/L
Other information	

Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Species	Daphnia
Compartment	
Duration	22 days
Test	NOEC
Result	0.5 mg/L
Other information	

## 12.2. Persistence and degradability

Product/substance	Amides, C8-18 and C18-unsatd., N,N-bis(hydroxyethyl)
Biodegradable	Yes
Test method	OECD 301 B
Result	>60 %; 28 d; aerobic

Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
Biodegradable	Yes
Test method	OECD 301 B
Result	90.4% in 28 d

Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Biodegradable	Yes
Test method	
Result	

## 12.3. Bioaccumulative potential

Product/substance	2-butoxyethanol;2-butoxyethanol; ethylene glycol monobutyl ether;ethylene glycol monobutyl ether;butyl cellosolve
Test method	
Potential bioaccumulation	No data available
LogPow	0.81
BCF	No data available

Other information

Product/substance	(2-methoxymethylethoxy)propanol (Dowanol DPM)
Test method	
Potential bioaccumulation	No data available
LogPow	0.004
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

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

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

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 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 - Acute toxicity

HP 7 - Carcinogenic

HP 14 - Ecotoxic

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

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

EWC code

Not applicable


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	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fuels, diesel; Gasoil - unspecified; [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).])	Class: 9 Labels: 9 Classification code: M6 	III	Yes	Limited quantities: 5 L Tunnel restriction code: 3 (-) See below for additional information.
IMDG	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE,	Class: 9	III	Yes	Limited quantities: 5

14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
	LIQUID, N.O.S. (Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).])	Labels: 9 Classification code: M6 			L EmS: F-A S-F See below for additional information.
IATA 3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fuels, diesel;Gasoil - unspecified;[A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163 °C to 357 °C (325 °F to 675 °F).])	Class: 9 Labels: 9 Classification code: M6	III	Yes	See below for additional information.

\* Packing group

\*\* Environmental hazards

#### Additional information

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR/IMDG/IATA provided the packaging's meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (ADR, IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).

IMDG / See the Dangerous Goods List, section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

#### 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.

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

E2 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 200 tonnes / (upper-tier): 500 tonnes

#### Additional information

Not applicable

#### Sources

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Working Conditions Act 1998 and latest Working Conditions Decree of 01-01-2021.

Major Accident Hazards Decree 2015.

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

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on

classification, labelling and packaging of substances and mixtures (CLP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

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

EUH066, Repeated exposure may cause skin dryness or cracking.

H226, Flammable liquid and vapour.

H302, Harmful if swallowed.

H304, May be fatal if swallowed and enters airways.

H312, Harmful in contact with skin.

H315, Causes skin irritation.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H332, Harmful if inhaled.

H351, Suspected of causing cancer.

H361, Suspected of damaging fertility or the unborn child.

H373, May cause damage to organs through prolonged or repeated exposure.

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 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 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)

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

RK

#### 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: NL-en