

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 25-3-2021 Revision date: 21-6-2024 Supersedes version of: 12-3-2024 Version: 3.1

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

#### 1.1. Product identifier

Product form : Mixture

 Trade name
 : Putoline Ultracool 12

 UFI
 : 9860-Q930-X00J-96Q1

Product code : PC.10.20

Type of product : Heat Transfer Fluids
Product group : Trade product

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

#### 1.2.1. Relevant identified uses

Intended for general public

Main use category : Industrial use, Professional use, Consumer use

Use of the substance/mixture : Antifreeze and coolant Function or use category : Anti-freezing agents

#### 1.2.2. Uses advised against

No additional information available

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

Putoline Oil
Dollegoorweg 15
NL 7602 EC Almelo
Netherlands
T 0031 (0)546 81 81 65
vib@putoline.com

#### 1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302 Specific target organ toxicity – Repeated exposure, Category 2 H373 Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed.

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#### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)





GHS07

GHS08

Signal word (CLP) : Warning
Contains : 1,2-ethanediol

Hazard statements (CLP) : H302 - Harmful if swallowed.

H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if

swallowed)

Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product. P301+P312 - IF SWALLOWED: Call doctor if you feel unwell. P314 - Get medical advice/attention if you feel unwell.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2-ethanediol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816- 28	< 80	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium benzoate	CAS-No.: 532-32-1 EC-No.: 208-534-8 REACH-no: 01-2119460683- 35	< 5	Eye Irrit. 2, H319

Comments

: The product has a bitter taste for safety reasons, in case it is swallowed accidentally

Full text of H- and EUH-statements: see section 16

#### **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

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First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : No additional information available.

Symptoms/effects after inhalation : Inhalation may affect the nervous system causing headache, possibly dizziness, nausea,

weakness, loss of coordination and unconsciousness.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : Ingestion may cause nausea, vomiting and diarrhea.

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

Treat symptomatically. Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other

toxic gases.

## 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

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

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

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Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed Precautions for safe handling

Hygiene measures

Not expected to present a significant hazard under anticipated conditions of normal use. Provide good ventilation in process area to prevent formation of vapour.

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Technical measures : Keep in a cool, well-ventilated place away from heat.

Keep container closed when not in use. Keep in a cool, well-ventilated place away from Storage conditions

heat.

Storage temperature : 0-40°C

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

#### 1,2-ethanediol (107-21-1)

**United Kingdom - Occupational Exposure Limits** 

WEL TWA (OEL TWA) 52 mg/m3 vapour

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Wear recommended personal protective equipment.

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#### Personal protective equipment symbol(s):







#### 8.2.2.1. Eye and face protection

#### Eye protection:

Safety glasses

Eye protection			
Туре	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

#### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Protective gloves

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0.35		EN ISO 374

#### Other skin protection

#### Materials for protective clothing:

Wear suitable protective clothing

## 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

#### **Environmental exposure controls:**

Avoid release to the environment.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Violet. Odour characteristic. Odour threshold Not available Melting point : Not applicable : -38 °C Freezing point : 100 - 197 °C Boiling point Flammability : Not applicable

Explosive properties : Presents no particular fire or explosion hazard.

Lower explosion limit : Not available Upper explosion limit : Not available

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Flash point : 111 °C Derived from flash point MEG (CAS: 107-21-1). Because of the presence of water, a

flashpoint cannot be measured.

Not available Auto-ignition temperature Decomposition temperature Not available

рΗ 8,5

Viscosity, kinematic 1 mm<sup>2</sup>/s (40 °C) - ASTM D7042 Solubility Water: Miscible in all proportions

Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure Not available Vapour pressure at 50°C : Not available

1,06 kg/l (15 °C) - ASTM D4052 Density

Relative density : Not available Relative vapour density at 20°C Not available Particle characteristics : Not applicable

#### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

: 0 % VOC content Refractive index : 1,3844

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

## 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

No decomposition if stored normally.

## **SECTION 11: Toxicological information**

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

Acute toxicity (oral) : Harmful if swallowed. Acute toxicity (dermal) : Not classified Acute toxicity (inhalation) : Not classified

Putoline Ultracool	12
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ATE CLP (oral) 1000 mg/kg bodyweight

## 1,2-ethanediol (107-21-1)

LD50 oral rat 7712 mg/kg bodyweight

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,2-ethanediol (107-21-1) D50 oral  D50 dermal C50 Inhalation - Rat  odium benzoate (532-32-1) D50 oral rat  D50 dermal rabbit C50 Inhalation - Rat  tin corrosion/irritation :	There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 30-100 milliliters. This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.  3500 mg/kg bodyweight mouse  > 2,5 mg/l  3450 mg/kg bodyweight Animal: rat, 95% CL: 3150 - 3740  > 2000 mg/kg bodyweight Animal: rabbit
D50 dermal C50 Inhalation - Rat  odium benzoate (532-32-1) D50 oral rat D50 dermal rabbit C50 Inhalation - Rat	more susceptible than rodents. The estimated fatal dose for man is 30-100 milliliters. This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.  3500 mg/kg bodyweight mouse  > 2,5 mg/l  3450 mg/kg bodyweight Animal: rat, 95% CL: 3150 - 3740  > 2000 mg/kg bodyweight Animal: rabbit
C50 Inhalation - Rat  odium benzoate (532-32-1)  D50 oral rat  D50 dermal rabbit  C50 Inhalation - Rat	> 2,5 mg/l  3450 mg/kg bodyweight Animal: rat, 95% CL: 3150 - 3740  > 2000 mg/kg bodyweight Animal: rabbit
odium benzoate (532-32-1) D50 oral rat D50 dermal rabbit C50 Inhalation - Rat	3450 mg/kg bodyweight Animal: rat, 95% CL: 3150 - 3740 > 2000 mg/kg bodyweight Animal: rabbit
D50 oral rat D50 dermal rabbit C50 Inhalation - Rat	> 2000 mg/kg bodyweight Animal: rabbit
D50 dermal rabbit C50 Inhalation - Rat	> 2000 mg/kg bodyweight Animal: rabbit
C50 Inhalation - Rat	
in corrosion/irritation :	> 12,2 mg/l/4h Animal: rat
	Not classified pH: 8,5
odium benzoate (532-32-1)	
Н	≈ 8 Remarks on result: 'other:'
erious eye damage/irritation :	Not classified pH: 8,5
odium benzoate (532-32-1)	
н	≈ 8 Remarks on result: 'other:'
,	Not classified
erm cell mutagenicity :	Not classified  Not classified
,2-ethanediol (107-21-1)	
OAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
eproductive toxicity :	Not classified
TOT-single exposure :	Not classified
TOT-repeated exposure :	May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).
,2-ethanediol (107-21-1)	
TOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).
odium benzoate (532-32-1)	
OAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat
OAEL (dermal, rat/rabbit, 90 days)	> 2500 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 82-2 (Repeated Dose Dermal Toxicity -21/28 Days)
spiration hazard :	Not classified
utoline Ultracool 12	
iscosity, kinematic	1 mm <sup>2</sup> /s (40 °C) - ASTM D7042
,2-ethanediol (107-21-1)	
iscosity, kinematic	14,505 mm²/s

## 11.2. Information on other hazards

No additional information available

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## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

Hazardous to the aquatic environment, long-term

: Not classified

(chronic)

1,2-ethanediol (107-21-1)			
LC50 - Fish [1]	72860 mg/l Test organisms (species): Pimephales promelas		
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna		
EC50 96h - Algae [1]	3536 mg/l Test organisms (species): other:grenn algae		
EC50 96h - Algae [2]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)		
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'		
sodium benzoate (532-32-1)			
LC50 - Fish [1]	484 mg/l Test organisms (species): Pimephales promelas		
EC50 72h - Algae [1]	> 30,5 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)		
NOEC chronic fish	10 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '144 h'		

## 12.2. Persistence and degradability

Putoline Ultracool 12		
Persistence and degradability	Biodegradable.	
1,2-ethanediol (107-21-1)		
Persistence and degradability	Rapidly degradable	
Biodegradation	90 % > 10d (OECD 301A method)	
sodium benzoate (532-32-1)		
Persistence and degradability	Rapidly degradable	

## 12.3. Bioaccumulative potential

1,2-ethanediol (107-21-1)	
Partition coefficient n-octanol/water (Log Kow)	-1,36

## 12.4. Mobility in soil

1,2-ethanediol (107-21-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1

## 12.5. Results of PBT and vPvB assessment

No additional information available

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#### 12.6. Endocrine disrupting properties

No additional information available

#### 12.7. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation Waste treatment methods

Sewage disposal recommendations
Product/Packaging disposal recommendations

Additional information

European List of Waste (LoW, EC 2000/532)

HP Code

- : Disposal must be done according to official regulations.
- : Do not allow into drains or water courses. Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Disposal must be done according to official regulations.
- : Dispose in a safe manner in accordance with local/national regulations.
- : Do not re-use empty containers.
- : 16 01 14\* antifreeze fluids containing dangerous substances
- : HP5 "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
  - HP6 "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
  - HP4 "Irritant skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

## **SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID		
14.1. UN number or ID n	14.1. UN number or ID number					
Not regulated for transport						
14.2. UN proper shippin	g name					
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		
14.3. Transport hazard o	class(es)					
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		
14.4. Packing group	14.4. Packing group					
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		
14.5. Environmental hazards						
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		
No supplementary information available						

#### 14.6. Special precautions for user

#### **Overland transport**

Not regulated

#### Transport by sea

Not regulated

## Air transport

Not regulated

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#### **Inland waterway transport**

Not regulated

#### Rail transport

Not regulated

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

Not applicable

## **SECTION 15: Regulatory information**

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

#### 15.1.1. EU-Regulations

#### **REACH Annex XVII (Restriction List)**

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Putoline Ultracool 12 ; 1,2-ethanediol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

#### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

#### **PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

#### **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

## Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

#### VOC Directive (2004/42)

VOC content : 0 %

#### Biocide Regulation (528/2012)

Child-resistant fastening : Not applicable Tactile warning : Applicable

#### **Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

## **Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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## **SECTION 16: Other information**

Indication of changes				
Section	Changed item	Change	Comments	
	Type of product	Added		
	Revision date	Modified		
	Supersedes	Modified		
9.1	Flash point	Modified		
13.1	H code	Added		

Abbreviations and acronyms:		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	

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Abbreviations and acronyms:		
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H302	Harmful if swallowed.	
H319	Causes serious eye irritation.	
H373	May cause damage to organs through prolonged or repeated exposure.	
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.