

# Safety Data Sheet

## EVO ULTRA



Safety Data Sheet dated 20/12/2022, version 3.0

This version cancels and substitutes any previous version

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

1.1. Product identifier

Mixture identification:

Trade name: EVO ULTRA

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

Recommended use:

Evaporator and Plastic Cleaner

1.3. Details of the supplier of the safety data sheet

Company:

ERRECOM SPA

Via Industriale, 14

Corzano (BS) Italy

Tel. +39 030/9719096

Competent person responsible for the safety data sheet:

lab@errecom.it

1.4. Emergency telephone number

+39 02-6610-1029 Poison Control Center Niguarda Ca' Granda - Milano - ITALY

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### SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)



Warning, Flam. Liq. 3, Flammable liquid and vapour.



Warning, Skin Irrit. 2, Causes skin irritation.



Danger, Eye Dam. 1, Causes serious eye damage.

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

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contains

quaternary ammonium salt ethoxylated (polymer); 1,2-benzisothiazolin-3-one: May produce an allergic reaction. butan-1-ol; Undecan-1-ol, ethoxylated; Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

Other Hazards:

No other hazards

### SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
$\geq 15\%$ - $< 20\%$	butan-1-ol	Index number: 603-004-00-6 CAS: 71-36-3 EC: 200-751-6 REACH No.: 01-21194846 30-38-XXXX	2.6/3 Flam. Liq. 3 H226 3.1/4/Oral Acute Tox. 4 H302 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 3.8/3 STOT SE 3 H335 3.8/3 STOT SE 3 H336
$\geq 5\%$ - $< 7\%$	2-(2-butoxyethoxy)ethanol	Index number: 603-096-00-8 CAS: 112-34-5 EC: 203-961-6 REACH No.: 01-21194751 04-44-XXXX	3.3/2 Eye Irrit. 2 H319
$\geq 1\%$ - $< 3\%$	Undecan-1-ol, ethoxylated	CAS: 34398-01-1 EC: 500-084-3	3.1/4/Oral Acute Tox. 4 H302 3.3/1 Eye Dam. 1 H318
$\geq 1\%$ - $< 2.5\%$	Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides	CAS: 308062-28-4 EC: 931-292-6 REACH No.: 01-21194900 61-47-XXXX	3.1/4/Oral Acute Tox. 4 H302 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 4.1/A1 Aquatic Acute 1 H400 4.1/C2 Aquatic Chronic 2 H411
$\geq 0.5\%$ - $< 1\%$	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	CAS: 68424-85-1 EC: 270-325-2 REACH No.: 01-21199651 80-41-XXXX	3.1/4/Oral Acute Tox. 4 H302 3.2/1B Skin Corr. 1B H314 3.3/1 Eye Dam. 1 H318

			4.1/A1 Aquatic Acute 1 H400 M=10. 4.1/C1 Aquatic Chronic 1 H410 M=1.
>= 0.25% - < 0.5%	quaternary ammonium salt ethoxylated (polymer)	CAS: 784144-40-7	3.2/2 Skin Irrit. 2 H315 3.4.2/1 Skin Sens. 1 H317
>= 0.1% - < 0.25%	didecyldimethylammonium chloride	Index number: 612-131-00-6 CAS: 7173-51-5 EC: 230-525-2 REACH No.: 01-21199459 87-15-XXXX	3.1/3/Oral Acute Tox. 3 H301 3.2/1B Skin Corr. 1B H314 3.3/1 Eye Dam. 1 H318 4.1/A1 Aquatic Acute 1 H400 M=10. 4.1/C2 Aquatic Chronic 2 H411 M=1.
>= 0.05% - < 0.1%	propan-2-ol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-21194575 58-25-XXXX	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319 3.8/3 STOT SE 3 H336
>= 0.01% - < 0.05%	1,2-benzisothiazolin-3-one	Index number: 613-088-00-6 CAS: 2634-33-5 EC: 220-120-9 REACH No.: 01-21207615 40-60-XXXX	3.4.2/1A Skin Sens. 1A H317 4.1/A1 Aquatic Acute 1 H400 3.1/4/Oral Acute Tox. 4 H302 Specific Concentration Limits: C >= 0,05%: Skin Sens. 1,1A,1B H317
>= 0.0001% - < 0.01%	2-(2-butoxyethoxy)ethanol	Index number: 603-096-00-8 CAS: 112-34-5 EC: 203-961-6 REACH No.: 01-21194751 04-44-XXXX	3.3/2 Eye Irrit. 2 H319

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

After contact with skin, wash immediately with soap and plenty of water.

Wash contaminated clothing before using them.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

- 4.2. Most important symptoms and effects, both acute and delayed  
No information available.
- 4.3. Indication of any immediate medical attention and special treatment needed  
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).  
Treatment:  
Treat symptomatically.
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#### **SECTION 5: Firefighting measures**

- 5.1. Extinguishing media  
Suitable extinguishing media:  
CO2 or Dry chemical fire extinguisher.  
Alcohol resistant foam fire extinguisher.  
Extinguishing media which must not be used for safety reasons:  
High pressure water jet.
- 5.2. Special hazards arising from the substance or mixture  
Do not inhale explosion and combustion gases.  
Burning produces heavy smoke.
- 5.3. Advice for firefighters  
Use suitable breathing apparatus.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Move undamaged containers from immediate hazard area if it can be done safely.
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#### **SECTION 6: Accidental release measures**

- 6.1. Personal precautions, protective equipment and emergency procedures  
For non emergency personnel:  
Wear personal protection equipment.  
Remove all sources of ignition.  
Remove persons to safety.  
See protective measures under point 7 and 8.  
For emergency responders:  
Wear personal protection equipment.
- 6.2. Environmental precautions  
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Retain contaminated washing water and dispose it.  
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.  
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up  
Wash with plenty of water.
- 6.4. Reference to other sections  
See also section 8 and 13
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#### **SECTION 7: Handling and storage**

- 7.1. Precautions for safe handling  
Avoid contact with skin and eyes, inhalation of vapours and mists.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
Advice on general occupational hygiene:  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.  
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

See subsection 10.5

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Information not available.

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

8.1. Control parameters

butan-1-ol - CAS: 71-36-3

ACGIH - TWA(8h): 20 ppm - Notes: Eye and URT irr

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

EU - TWA(8h): 67.5 mg/m<sup>3</sup>, 10 ppm - STEL: 101.2 mg/m<sup>3</sup>, 15 ppm

ACGIH - TWA(8h): 10 ppm - Notes: (IFV) - Hematologic, liver and kidney eff

propan-2-ol - CAS: 67-63-0

ACGIH - TWA: 200 ppm - STEL: 400 ppm

MAK - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL(15min): 1000 mg/m<sup>3</sup>, 400 ppm

VLA - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL(15min): 1000 mg/m<sup>3</sup>, 400 ppm

VLEP - STEL(15min): 980 mg/m<sup>3</sup>, 400 ppm

WEL - TWA(8h): 999 mg/m<sup>3</sup>, 400 ppm - STEL(15min): 1250 mg/m<sup>3</sup>, 500 ppm

TLV - TWA(8h): 980 mg/m<sup>3</sup>, 400 ppm - STEL(15min): 1225 mg/m<sup>3</sup>, 500 ppm

NDS - TWA(8h): 900 mg/m<sup>3</sup> - STEL(15min): 1200 mg/m<sup>3</sup>

NPHV - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL(15min): 1000 mg/m<sup>3</sup>

MV - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL(15min): 2000 mg/m<sup>3</sup>, 800 ppm

GVI - TWA(8h): 999 mg/m<sup>3</sup>, 400 ppm - STEL(15min): 1250 mg/m<sup>3</sup>, 500 ppm

TLV (CZ) - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL(15min): 1000 mg/m<sup>3</sup>, 400 ppm

TLV (EST) - TWA(8h): 350 mg/m<sup>3</sup>, 150 ppm - STEL(15min): 600 mg/m<sup>3</sup>, 250 ppm

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

EU - TWA(8h): 67.5 mg/m<sup>3</sup>, 10 ppm - STEL: 101.2 mg/m<sup>3</sup>, 15 ppm

ACGIH - TWA(8h): 10 ppm - Notes: (IFV) - Hematologic, liver and kidney eff

DNEL Exposure Limit Values

butan-1-ol - CAS: 71-36-3

Worker Professional: 310 mg/m<sup>3</sup> - Consumer: 55 mg/m<sup>3</sup> - Exposure: Human Inhalation  
- Frequency: Long Term (repeated)

Consumer: 3125 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated)

Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides - CAS: 308062-28-4

Worker Professional: 11 mg/kg - Consumer: 5.5 mg/kg - Exposure: Human Dermal -  
Frequency: Long Term, systemic effects

Worker Professional: 6.2 mg/m<sup>3</sup> - Consumer: 1.53 mg/m<sup>3</sup> - Exposure: Human Inhalation  
- Frequency: Long Term, systemic effects

Consumer: 0.44 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic  
effects

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS:  
68424-85-1

Worker Professional: 3.96 mg/m<sup>3</sup> - Consumer: 1.64 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 5.7 mg/kg - Consumer: 3.4 mg/kg - Exposure: Human Dermal -  
Frequency: Long Term, systemic effects

didecyldimethylammonium chloride - CAS: 7173-51-5  
Worker Professional: 5.39 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Professional: 5.39 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects  
Worker Professional: 1.55 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Professional: 1.55 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects

propan-2-ol - CAS: 67-63-0  
Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
Worker Industry: 500 mg/m<sup>3</sup> - Consumer: 89 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

1,2-benzisothiazolin-3-one - CAS: 2634-33-5  
Worker Professional: 1 mg/m<sup>3</sup> - Consumer: 1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

butan-1-ol - CAS: 71-36-3  
Target: Fresh Water - Value: 0.08 mg/L  
Target: Aquatic, periodic release - Value: 2.25 mg/L  
Target: Marine water - Value: 0.008 mg/L  
Target: Freshwater sediments - Value: 0.324 mg/kg  
Target: Microorganisms in sewage treatments - Value: 2476 mg/L  
Target: Marine water sediments - Value: 0.032 mg/kg  
Target: Soil (agricultural) - Value: 0.01 mg/kg

Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides - CAS: 308062-28-4  
Target: Fresh Water - Value: 0.034 mg/L  
Target: Marine water - Value: 0.003 mg/L  
Target: Freshwater sediments - Value: 5.24 mg/kg  
Target: Marine water sediments - Value: 0.524 mg/kg  
Target: Soil (agricultural) - Value: 1.02 mg/kg  
Target: Aquatic, periodic release - Value: 0.0335 mg/L  
Target: Microorganisms in sewage treatments - Value: 24 mg/kg

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1  
Target: Fresh Water - Value: 0.001 mg/L  
Target: Marine water - Value: 0.001 mg/L  
Target: Freshwater sediments - Value: 12.27 mg/kg - Notes:: dry weight  
Target: Marine water sediments - Value: 13.09 mg/kg - Notes:: dry weight  
Target: Microorganisms in sewage treatments - Value: 0.4 mg/L  
Target: Soil (agricultural) - Value: 7 mg/kg - Notes:: dry weight

didecyldimethylammonium chloride - CAS: 7173-51-5  
Target: Fresh Water - Value: 0.002 mg/L  
Target: Marine water - Value: 0.0002 mg/L  
Target: Freshwater sediments - Value: 2.82 mg/kg  
Target: Marine water sediments - Value: 0.28 mg/kg  
Target: Microorganisms in sewage treatments - Value: 0.595 mg/L  
Target: Soil (agricultural) - Value: 1.4 mg/kg

propan-2-ol - CAS: 67-63-0  
Target: Fresh Water - Value: 140.9 mg/L  
Target: Marine water - Value: 140.9 mg/L  
Target: Freshwater sediments - Value: 552 mg/kg

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Target: Aquatic, periodic release - Value: 140.9 mg/L  
Target: Microorganisms in sewage treatments - Value: 2251 mg/L  
Target: Marine water sediments - Value: 552 mg/kg  
Target: Soil (agricultural) - Value: 28 mg/kg

### 8.2. Exposure controls

#### Eye protection:

Use close safety visors, don't use eye lens.

#### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

#### Protection for hands:

work gloves resistant to penetration (ref. standard EN 374).

Suitable material:

CR (polychloroprene, chloroprene rubber).

NBR (nitrile rubber).

Material thickness: 0.7 mm minimum.

Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

#### Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Mask with filter "AX", brown colour

#### Thermal Hazards:

None

#### Environmental exposure controls:

None

#### Appropriate engineering controls:

None

## SECTION 9: Physical and chemical properties

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

Properties	Value	Method:	Notes:
Physical state:	Liquid	--	--
Colour:	Red	--	--
Odour:	mint	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	Flam. Liq. 3, H226	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	55 ° C	ASTM-D 93	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	7	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient	N.A.	--	--

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n-octanol/water (log value):			
Vapour pressure:	N.A.	--	--
Density and/or relative density:	1.03 g/mL (+20°C/+68°F)	ASTM-D4052	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

### 9.2. Other information

No other relevant information

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

None

### 10.4. Conditions to avoid

Avoid overheating, electrostatic discharge and all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

When heated or in the event of fire may release gases and vapors potentially dangerous to health.

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## SECTION 11: Toxicological information

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

Toxicological information of the product:

#### a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

#### b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

#### c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

#### d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

#### e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

#### f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

#### g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

#### h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

#### i) STOT-repeated exposure



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Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

butan-1-ol - CAS: 71-36-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 2292 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 3430 mg/kg

Test: LC0 - Route: Inhalation - Species: Rat > 17.76 mg/L - Duration: 4h

Test: NOAEL - Route: Oral - Species: Rat 125 mg/kg - Notes: bw/day

b) skin corrosion/irritation:

Test: Skin Irritant Positive

c) serious eye damage/irritation:

Test: Eye Irritant Positive

e) germ cell mutagenicity:

Test: Ames test Negative

Test: chromosomal aberration test Negative

g) reproductive toxicity:

Test: NOAEL - Route: Oral - Species: Rat 1454 mg/kg - Notes: bw/day

h) STOT-single exposure:

Test: Respiratory Tract Irritant Positive

Undecan-1-ol, ethoxylated - CAS: 34398-01-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 300 mg/kg

b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Negative - Duration: 4h - Notes: not irritant

Test: Respiratory Tract Irritant Positive - Notes: possible irritation of the respiratory tract

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive - Notes: irritant

Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides - CAS: 308062-28-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 1064 mg/kg

Test: NOAEL - Route: Oral - Species: Rat 88 mg/kg/day

Test: LOAEL - Route: Skin - Species: Mouse 0.045 mg/cm<sup>2</sup>

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin Positive

c) serious eye damage/irritation:

Test: Eye Irritant Positive

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Negative

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS:

68424-85-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 344 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 3412 mg/kg - Notes: Method: OPPTS

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b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive - Duration: 4h - Source:

Method: DOT

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin - Species: Guinea pig Negative - Source: Buehler

Test OECD TG 406

e) germ cell mutagenicity:

Test: Ames test - Route: In vitro - Species: Salmonella Typhimurium Negative - Source: OECD TG 471 - Notes: Methabolic activation: yes - BPL: yes  
Test: chromosomal aberration test - Route: In vitro - Species: Human lymphocytes Negative - Source: OECD TG 473 - Notes: Methabolic activation: yes  
Test: Mutagenesis - Route: In vitro - Species: Chinese hamster ovary cells Negative - Source: OECD TG 476 - Notes: Methabolic activation: yes - BPL: yes  
Test: Genotoxicity - Route: In vitro - Species: rat hepatocytes Negative - Source: Unscheduled DNA synthesis test OECD TG 482 - Notes: BPL: yes

g) reproductive toxicity:

Test: NOAEL - Route: Oral - Species: Rat Negative 54 mg/kg - Source: OECD TG 416 - Notes: Doses: 0-300-1000-2000 ppm. General toxicity F1: 54-86 mg / kg, general toxicity

quaternary ammonium salt ethoxylated (polymer) - CAS: 784144-40-7

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive - Notes: irritant

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Positive - Notes: cause sensitization

didecyldimethylammonium chloride - CAS: 7173-51-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 238 mg/kg - Source: Method: OECD Test Guideline 401

Test: LD50 - Route: Skin - Species: Rabbit 3342 mg/kg

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Rabbit Positive - Source: Method: OECD Test Guideline 404 - Notes: Exposure time: 3 min

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin - Species: Guinea pig Negative - Source: Method: US-EPA, OECD TG 406 - Notes: Buehler Test

e) germ cell mutagenicity:

Test: Ames test - Species: Salmonella Typhimurium Negative - Source: Method: OECD Test Guideline 471 - Notes: Metabolic activation

Test: chromosomal aberration test - Route: In vitro - Species: Chinese hamster ovary cells Negative - Notes: Metabolic activation

Test: Mutagenesis - Species: Chinese hamster ovary cells Negative - Notes: Metabolic activation

Test: chromosomal aberration test - Route: Oral - Species: Rat Negative 600 mg/kg - Source: Method: OECD Test Guideline 475 - Notes: Chromosome aberration test in vivo

propan-2-ol - CAS: 67-63-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 4710 mg/kg

Test: LD50 - Route: Skin - Species: Rat 12800 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat 72.6 mg/L - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit 6290 mg/kg

1,2-benzisothiazolin-3-one - CAS: 2634-33-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 670 mg/kg - Notes: OECD TG 401

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Notes: OECD TG 402

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Rabbit Positive - Duration: 4h - Notes: US-EPA

c) serious eye damage/irritation:

Test: Eye Corrosive - Route: Eyes - Species: Rabbit Positive - Notes: OECD TG 405

- d) respiratory or skin sensitisation:  
Test: Skin Sensitization - Route: Skin - Species: Human beings Positive
- e) germ cell mutagenicity:  
Test: Mutagenesis - Route: In vitro - Species: Salmonella Typhimurium Negative -  
Notes: OECD TG 471  
Test: chromosomal aberration test - Route: In vitro - Species: Human lymphocytes  
Negative - Notes: OECD TG 473; with Metabolic activation  
Test: Mutagenesis - Route: In vitro - Species: murine lymphoma cells Negative - Notes:  
OECD TG 476  
Test: Micronucleus test - Route: In vivo - Species: Mouse Negative - Notes: OECD TG  
474; Cell type: Bone marrow; Oral; Doses: 1200 mg/kg
- 2-(2-butoxyethoxy)ethanol - CAS: 112-34-5  
LD50 (RAT) ORAL: 6560 MG/KG  
LD50 (RABBIT) SKIN: 4120 MG/KG

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

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**SECTION 12: Ecological information**

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

The product is classified: Aquatic Chronic 3 - H412

butan-1-ol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1376 mg/L - Duration h: 96 - Notes: Species:  
Pimephales promelas

Endpoint: EC50 - Species: Daphnia = 1328 mg/L - Duration h: 48 - Notes: Species:  
Daphnia magna

Endpoint: EC50 - Species: Algae = 225 mg/L - Duration h: 96 - Notes: Species:  
Selenastrum capricornutum

Undecan-1-ol, ethoxylated

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Fish 1 mg/L - Duration h: 96

Endpoint: EC50 - Species: Daphnia 1 mg/L - Duration h: 48

Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 2.67 mg/L

Endpoint: EC50 - Species: Daphnia 3.1 mg/L

Endpoint: IC50 - Species: Algae 0.143 mg/L

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae 0.067 mg/L - Duration h: 72

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 0.28 mg/L - Duration h: 96 - Notes: Species:

Pimephales promelas (fathead minnow) Acute Toxicity Method: US-EPA

Endpoint: EC50 - Species: Daphnia 0.016 mg/L - Duration h: 48 - Notes: Species:

Daphnia magna (Water flea) Immobilization Method: OECD Test Guideline 202

Endpoint: ErC50 - Species: Algae 0.049 mg/L - Duration h: 72 - Notes: Species:

Pseudokirchneriella subcapitata (green algae)

Cell multiplication inhibition test Method: OECD Test Guideline 201

Endpoint: NOEC - Species: Fish 0.456 mg/L - Duration h: 96 - Notes: Species: Lepomis  
macrochirus

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Endpoint: LC50 - Species: Fish 0.515 mg/L - Duration h: 96 - Notes: Species: Lepomis macrochirus

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish 0.0322 mg/L - Duration h: 816 - Notes: Species: Pimephales promelas (fathead minnow) Early-life Stage Method: EPA-FIFRA

Endpoint: NOEC - Species: Daphnia 0.00415 mg/L - Duration h: 504 - Notes: Species: Daphnia magna (Water flea) Reproduction Test Method: EPA-FIFRA

c) Bacteria toxicity:

Endpoint: EC50 - Species: Activated sludge 7.75 mg/L - Duration h: 3 - Notes: OECD Test Guideline 209

d) Terrestrial toxicity:

Endpoint: LC50 - Species: earthworms 7070 mg/kg - Duration h: 336 - Notes: Species: Eisenia fetida Method: OECD Test Guideline 207

Endpoint: EC50 - Species: Microflora of the soil > 1000 mg/kg - Duration h: 672 - Notes: OECD Test Guideline 216

e) Plant toxicity:

Endpoint: EC50 - Species: Terrestrial plants 277 mg/kg - Duration h: 336 - Notes: Growth inhibition Method: OECD Test Guideline 208

### didecyldimethylammonium chloride

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 0.19 mg/L - Duration h: 96 - Notes: Species: Pimephales promelas (fathead minnow) Acute toxicity Method: US-EPA

Endpoint: EC50 - Species: Daphnia 0.062 mg/L - Duration h: 48 - Notes: Species: Daphnia magna (Water flea) Immobilization Method: EPA-FIFRA

Endpoint: ErC50 - Species: Algae 0.026 mg/L - Duration h: 96 - Notes: Species: Pseudokirchneriella subcapitata (green algae) Growth inhibition Method: OECD Test Guideline 201

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish 0.032 mg/L - Duration h: 816 - Notes: Species: Danio rerio (zebra fish) Chronic toxicity Method: OECD Test Guideline 210

Endpoint: NOEC - Species: Daphnia 0.014 mg/L - Duration h: 504 - Notes: Species: Daphnia magna (Water flea)

c) Bacteria toxicity:

Endpoint: EC50 - Species: Activated sludge 11 mg/L - Duration h: 3 - Notes: Species: activated sludge Respiration inhibition Method: OECD Test Guideline 209

d) Terrestrial toxicity:

Endpoint: NOEC - Species: earthworms > 1000 mg/kg - Duration h: 336 - Notes: Species: Eisenia fetida Method: OECD Test Guideline 207

e) Plant toxicity:

Endpoint: EC50 - Species: Terrestrial plants 283 mg/kg - Duration h: 336 - Notes: 283 - 1670 mg/kg Growth inhibition Method: OECD Test Guideline 208

### propan-2-ol

a) Aquatic acute toxicity:

Endpoint: EC0 - Species: Fish 10000 mg/L - Duration h: 48 - Notes: Pimephales promelas

Endpoint: LC50 - Species: Fish > 1400 mg/L - Duration h: 96 - Notes: Lepomis macrochirus

Endpoint: LC50 - Species: Fish 6550 mg/L - Duration h: 96 - Notes: Pimephales promelas

### 1,2-benzisothiazolin-3-one

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 2.18 mg/L - Duration h: 96 - Notes: Species: Oncorhynchus mykiss; Method: OECD TG 203

Endpoint: EC50 - Species: Daphnia 2.94 mg/L - Duration h: 48 - Notes: Species: Daphnia magna; Method: OECD TG 202

- Endpoint: ErC50 - Species: Algae 0.11 mg/L - Duration h: 72 - Notes: Species: Pseudokirchneriella subcapitata; Method: OECD TG 201  
Endpoint: ErC50 - Species: Algae 0.15 mg/L - Duration h: 72 - Notes: Species: Selenastrum capricornutum; Test type: Growth inhibitor
- b) Aquatic chronic toxicity:  
Endpoint: NOEC - Species: Fish 0.3 mg/L - Duration h: 672 - Notes: Species: Oncorhynchus mykiss; Test type: Growth inhibitor  
Endpoint: NOEC - Species: Daphnia 1.7 mg/L - Duration h: 504 - Notes: Species: Daphnia magna; Method: OECD TG 211
- d) Terrestrial toxicity:  
Endpoint: LC50 - Species: earthworms > 410.6 mg/kg - Duration h: 336 - Notes: Species: Eisenia fetida; Method: OECD TG 207  
Endpoint: NOEC - Species: Microflora of the soil 263.7 mg/kg - Duration h: 672 - Notes: OECD TG 216
- 12.2. Persistence and degradability  
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides - CAS: 308062-28-4  
Biodegradability: Readily biodegradable  
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1  
Test: OECD Confirmatory Test: - %: 90 - Notes: Method: OECD Test Guideline 303 A  
Test: Modified SCAS Test - Duration: 7 d - %: 99 - Notes: Method: OECD Test Guideline 302 A  
Biodegradability: Readily biodegradable - Test: CO2 Evolution Test - Duration: 28 d - %: 95.5 - Notes: Method: OECD Test Guideline 301B. Concentration 5 mg / L  
didecyldimethylammonium chloride - CAS: 7173-51-5  
Biodegradability: Readily biodegradable - Test: Modified Sturm Test - Duration: 28 d - %: 72 - Notes: Method: OECD Test Guideline 301B, concentration: 10 mg/L  
Test: Die-Away Test - Duration: 28 d - %: 93.3 - Notes: Concentration: 0,016 mg/L  
Test: OECD Confirmatory Test: - Duration: 24 - 70 d - %: 91 - Notes: Method: OECD Test Guideline 303 A  
propan-2-ol - CAS: 67-63-0  
Biodegradability: Readily biodegradable  
1,2-benzisothiazolin-3-one - CAS: 2634-33-5  
Biodegradability: Readily biodegradable - Duration: 28 d - %: 70
- 12.3. Bioaccumulative potential  
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1  
Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentration factor - Duration: 35 d - Notes: BCF: 79 - Concentration: 0,076 mg/L  
Test: log Pow - Notes: 2.75 (20 °C) - Method: OECD TG 107 - GLP: yes  
propan-2-ol - CAS: 67-63-0  
Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05  
1,2-benzisothiazolin-3-one - CAS: 2634-33-5  
Bioaccumulation: Not bioaccumulative
- 12.4. Mobility in soil  
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1  
Mobility in soil: Not mobile - Test: Koc 282624 - Notes: L/kg Kd: 13630, log Kd: 3,13 - Method: OECD TG 106  
didecyldimethylammonium chloride - CAS: 7173-51-5  
Mobility in soil: Mobile - Notes: Method: US-EPA
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Endocrine disrupting properties  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$

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12.7. Other adverse effects  
None

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### SECTION 13: Disposal considerations

13.1. Waste treatment methods  
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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### SECTION 14: Transport information



14.1. UN number or ID number  
ADR-UN Number: 1987  
IATA-UN Number: 1987  
IMDG-UN Number: 1987

14.2. UN proper shipping name  
ADR-Shipping Name: ALCOHOLS, N.O.S. (butan-1-ol, propan-2-ol)  
IATA-Shipping Name: ALCOHOLS, N.O.S. (butan-1-ol, propan-2-ol)  
IMDG-Shipping Name: ALCOHOLS, N.O.S. (butan-1-ol, propan-2-ol)

14.3. Transport hazard class(es)  
ADR-Class: 3  
ADR - Hazard identification number: 30  
IATA-Class: 3  
IATA-Label: 3  
IMDG-Class: 3

14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III

14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No  
IMDG-EmS: F-E , S-D

14.6. Special precautions for user  
ADR-Subsidiary hazards: -  
ADR-S.P.: 274 601  
ADR-Transport category (Tunnel restriction code): 3 (D/E)  
IATA-Passenger Aircraft: 355  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 366  
IATA-S.P.: A3 A180  
IATA-ERG: 3L  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category A  
IMDG-Segregation: -

14.7. Maritime transport in bulk according to IMO instruments  
N.A.

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### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
  - Dir. 2000/39/EC (Occupational exposure limit values)
  - Regulation (EC) n. 1907/2006 (REACH)
  - Regulation (EC) n. 1272/2008 (CLP)
  - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
  - Regulation (EU) n. 2020/878
  - Regulation (EU) n. 286/2011 (ATP 2 CLP)
  - Regulation (EU) n. 618/2012 (ATP 3 CLP)
  - Regulation (EU) n. 487/2013 (ATP 4 CLP)
  - Regulation (EU) n. 944/2013 (ATP 5 CLP)
  - Regulation (EU) n. 605/2014 (ATP 6 CLP)
  - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
  - Regulation (EU) n. 2016/918 (ATP 8 CLP)
  - Regulation (EU) n. 2016/1179 (ATP 9 CLP)
  - Regulation (EU) n. 2017/776 (ATP 10 CLP)
  - Regulation (EU) n. 2018/669 (ATP 11 CLP)
  - Regulation (EU) n. 2018/1480 (ATP 13 CLP)
  - Regulation (EU) n. 2019/521 (ATP 12 CLP)
  - Regulation (EU) n. 2020/217 (ATP 14 CLP)
  - Regulation (EU) n. 2020/1182 (ATP 15 CLP)
  - Regulation (EU) n. 2021/643 (ATP 16 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 55

Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P5c

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

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## **SECTION 16: Other information**

Full text of phrases referred to in Section 3:

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

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H314 Causes severe skin burns and eye damage.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H317 May cause an allergic skin reaction.  
 H301 Toxic if swallowed.  
 H225 Highly flammable liquid and vapour.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Skin Sens. 1,1A,1B	3.4.2/1-1A-1B	Skin Sensitisation, Category 1,1A,1B
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification  
 SECTION 3: Composition/information on ingredients  
 SECTION 8: Exposure controls/personal protection  
 SECTION 9: Physical and chemical properties  
 SECTION 11: Toxicological information  
 SECTION 12: Ecological information  
 SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities  
 SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold



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The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.