

Safety Data Sheet dated 31/10/2022, version 5.0

This version cancels and substitutes any previous version

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

1.1. Product identifier

Mixture identification:

Trade name: SWORD

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

Recommended use:

Scented Revitalizing Treatment for Evaporators with Anticorrosion Power

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

 Warning, Acute Tox. 4, Harmful if inhaled.

 Warning, Eye Irrit. 2, Causes serious eye irritation.

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:



Warning

Hazard statements:

H332 Harmful if inhaled.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing vapours.

P280 Wear protective gloves and eye protection.

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:

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None

Contains

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)-ethanone; methenamine;

1,2-benzisothiazolin-3-one: May produce an allergic reaction. Sodium N-lauroylsarcosinate

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
$\geq 7\%$ - $< 10\%$	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
$\geq 2.5\%$ - $< 5\%$	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
$\geq 2.5\%$ - $< 5\%$	Sodium N-lauroylsarcosinate	CAS: 137-16-6 EC: 205-281-5 REACH No.: 01-21195277 80-39-XXXX	3.1/2/Inhal Acute Tox. 2 H330 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: C $\geq 34,5\%$: Acute Tox. 2 H330 0% \leq C $< 34,5\%$: Acute Tox. 4 H332 C $\geq 30\%$: Skin Irrit. 2 H315 C $\geq 30\%$: Eye Dam. 1 H318 1% \leq C $< 30\%$: Eye Irrit. 2 H319
$\geq 1\%$ - $< 2.5\%$	ethanol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH No.: 01-21194576 10-43-XXXX	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319
$\geq 1\%$ - $< 2.5\%$	Isotridecanol, ethoxylated	CAS: 9043-30-5	3.1/4/Oral Acute Tox. 4 H302 3.3/1 Eye Dam. 1 H318
$\geq 0.25\%$ - $< 0.5\%$	1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)-ethanone	CAS: 54464-57-2 EC: 915-730-3 REACH No.: 01-21194899	3.2/2 Skin Irrit. 2 H315 3.4.2/1B Skin Sens. 1B H317

	ne		89-04-XXXX	4.1/C1 Aquatic Chronic 1 H410 M=1.
>= 0.1% - < 0.25%	methenamine	Index number: CAS: EC: REACH No.:	612-101-00-2 100-97-0 202-905-8 01-21194748 95-20-XXXX	2.7/2 Flam. Sol. 2 H228 3.4.2/1 Skin Sens. 1 H317
>= 0.1% - < 0.25%	Quaternary ammonium compounds, benzyl-C12-16-alkyldi methyl, chlorides	CAS: EC: REACH No.:	68424-85-1 270-325-2 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.
>= 0.05% - < 0.1%	didecyldimethylammonium chloride	Index number: CAS: EC: REACH No.:	612-131-00-6 7173-51-5 230-525-2 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.
>= 0.01% - < 0.05%	1,2-benzisothiazolin-3-one	Index number: CAS: EC: REACH No.:	613-088-00-6 2634-33-5 220-120-9 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%	sodium hydroxide	Index number: CAS: EC: REACH No.:	011-002-00-6 1310-73-2 215-185-5 01-21194578 92-27-XXXX	2.16/1 Met. Corr. 1 H290 3.2/1A Skin Corr. 1A H314 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: C >= 5%: Skin Corr. 1A H314 2% <= C < 5%: Skin Corr. 1B H314 0,5% <= C < 2%: Skin Irrit. 2 H315 0,5% <= C < 2%: Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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

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 induce vomiting.
- In case of Inhalation:
If breathing is irregular or stopped, administer artificial respiration.
In case of inhalation, consult a doctor immediately and show him packing or label.
- 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:
No information available.

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
Suitable extinguishing media:
Water.
Carbon dioxide (CO₂).
Extinguishing media which must not be used for safety reasons:
None in particular.
- 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.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures
For non emergency personnel:
Wear personal protection equipment.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
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

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

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 in a dry and well ventilated place.

Store away from direct sunlight.

Store the product between + 0 °C / + 32 °F and + 40 °C / + 104 °F.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Information not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

ACGIH - TWA: 200 ppm - STEL: 400 ppm

MAK - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

VLA - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

VLEP - STEL(15min): 980 mg/m³, 400 ppm

WEL - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm

TLV - TWA(8h): 980 mg/m³, 400 ppm - STEL(15min): 1225 mg/m³, 500 ppm

NDS - TWA(8h): 900 mg/m³ - STEL(15min): 1200 mg/m³

NPHV - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³

MV - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 2000 mg/m³, 800 ppm

GVI - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm

TLV (CZ) - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

TLV (EST) - TWA(8h): 350 mg/m³, 150 ppm - STEL(15min): 600 mg/m³, 250 ppm

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

EU - TWA(8h): 67.5 mg/m³, 10 ppm - STEL: 101.2 mg/m³, 15 ppm

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

ethanol - CAS: 64-17-5

ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr

AGW - TWA(8h): 380 mg/m³, 200 ppm - STEL(15min): 1520 mg/m³, 800 ppm

MAK - TWA(8h): 380 mg/m³, 200 ppm - STEL(15min): 1520 mg/m³, 800 ppm

VLA - STEL(15min): 1910 mg/m³, 1000 ppm

VLEP - TWA(8h): 1900 mg/m³, 1000 ppm - STEL(15min): 9500 mg/m³, 5000 ppm

WEL - TWA(8h): 1920 mg/m³, 1000 ppm

TLV (GR) - TWA(8h): 1900 mg/m³, 1000 ppm

GVI - TWA(8h): 1900 mg/m³, 1000 ppm

NDS - TWA(8h): 1900 mg/m³

NPHV - TWA(8h): 960 mg/m³, 500 ppm - STEL(15min): 1920 mg/m³

TLV - TWA(8h): 1000 mg/m³

TLV (CZ) - TWA(8h): 1000 mg/m³, 522 ppm - STEL(15min): 3000 mg/m³, 1566 ppm

TLV (EST) - TWA(8h): 1000 mg/m³, 500 ppm - STEL(15min): 1900 mg/m³, 1000 ppm

methenamine - CAS: 100-97-0

ACGIH - TWA(8h): 1 mg/m³ - Notes: (IFV), DSEN; A4 - Dermal sens

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sodium hydroxide - CAS: 1310-73-2
ACGIH - STEL: Ceiling 2 mg/m³ - Notes: URT, eye, and skin irr

DNEL Exposure Limit Values

propan-2-ol - CAS: 67-63-0
Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects
Worker Industry: 500 mg/m³ - Consumer: 89 mg/m³ - 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

Sodium N-lauroylsarcosinate - CAS: 137-16-6
Worker Professional: 70.53 mg/m³ - Consumer: 17.39 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 20 mg/kg - Consumer: 10 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 10 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

ethanol - CAS: 64-17-5
Worker Industry: 1900 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Industry: 950 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Industry: 343 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

methenamine - CAS: 100-97-0
Worker Professional: 6.4 mg/kg - Consumer: 3.2 mg/kg - Exposure: Human Dermal - Frequency: Short Term (acute)
Worker Professional: 6.4 mg/kg - Consumer: 3.2 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated)
Worker Professional: 5.6 mg/m³ - Consumer: 1.2 mg/m³ - Exposure: Human Inhalation
Consumer: 0.8 mg/kg - Exposure: Human Oral

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1
Worker Professional: 3.96 mg/m³ - Consumer: 1.64 mg/m³ - 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/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 5.39 mg/m³ - 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

1,2-benzisothiazolin-3-one - CAS: 2634-33-5
Worker Professional: 1 mg/m³ - Consumer: 1 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

sodium hydroxide - CAS: 1310-73-2
Worker Professional: 1 mg/m³ - Consumer: 1 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

propan-2-ol - CAS: 67-63-0
Target: Fresh Water - Value: 140.9 mg/L

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- Target: Marine water - Value: 140.9 mg/L
- Target: Freshwater sediments - Value: 552 mg/kg
- 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
- Sodium N-lauroylsarcosinate - CAS: 137-16-6
 - Target: Fresh Water - Value: 0.009 mg/L
 - Target: Fresh water, intermittent - Value: 0.089 mg/L
 - Target: Marine water - Value: 0.001 mg/L
 - Target: Marine water, intermittent - Value: 0.009 mg/L
 - Target: Freshwater sediments - Value: 0.064 mg/kg
 - Target: Marine water sediments - Value: 0.006 mg/kg
 - Target: Microorganisms in sewage treatments - Value: 3 mg/L
 - Target: Soil (agricultural) - Value: 0.008 mg/kg
- ethanol - CAS: 64-17-5
 - Target: Fresh Water - Value: 0.96 mg/L
 - Target: Marine water - Value: 0.79 mg/L
 - Target: Freshwater sediments - Value: 36 mg/kg
 - Target: Marine water sediments - Value: 2.9 mg/kg
 - Target: Aquatic, periodic release - Value: 2.75 mg/L
 - Target: Microorganisms in sewage treatments - Value: 580 mg/L
 - Target: Secondary poisoning - Value: 0.72 mg/kg
 - Target: Soil (agricultural) - Value: 0.63 mg/kg
- methenamine - CAS: 100-97-0
 - Target: Fresh Water - Value: 3 mg/L
 - Target: Marine water - Value: 0.3 mg/L
 - Target: Microorganisms in sewage treatments - Value: 100 mg/L
 - Target: Freshwater sediments - Value: 1.02 mg/kg
 - Target: Marine water sediments - Value: 1.02 mg/kg
 - Target: Soil (agricultural) - Value: 0.28 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

8.2. Exposure controls

Eye protection:

Protective airtight goggles (ref. Standard EN 166).

Protection for skin:

Not needed for normal use.

Protection for hands:

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

Suitable material:

NBR (nitrile rubber).

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NR (natural rubber, natural latex).

Material thickness: 0.4 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:

Mask with filter "A", 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:	perfumed	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	8.5	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	total	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.9 g/mL (20°C / 68°F)	--	--
Relative vapour density:	N.A.	--	--

Particle characteristics:

Particle size:	N.A.	--	--
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9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

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- Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Store away from heat.
- 10.5. Incompatible materials
None in particular.
- 10.6. Hazardous decomposition products
No data available

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
The product is classified: Acute Tox. 4 H332
- b) skin corrosion/irritation
Not classified
Based on available data, the classification criteria are not met
- c) serious eye damage/irritation
The product is classified: Eye Irrit. 2 H319
- 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
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:

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

Sodium N-lauroylsarcosinate - CAS: 137-16-6

- a) acute toxicity:
Test: LC50 - Route: Inhalation - Species: Rat > 1-5 mg/L - Duration: 4h - Source:
OECD Test Guideline 403 - Notes: Test substance: 35% Remarks: Harmful by
inhalation.

- Test: LC50 - Route: Inhalation - Species: Rat > 0.05-0.5 mg/L - Duration: 4h - Source: OECD Test Guideline 403 - Notes: Test substance: 100% Remarks: Toxic by inhalation.
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: OECD Test Guideline 401
- b) skin corrosion/irritation:
Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Duration: 4h - Source: OECD Test Guideline 404 - Notes: Test substance: 30%
- c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Positive - Source: OECD Test Guideline 405 - Notes: Test substance: 30%
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Route: Skin - Species: Guinea pig Negative - Source: Dir. 67/548/CEE, Annex V, B.6. - Notes: Test substance: 30%
- e) germ cell mutagenicity:
Test: Genotoxicity - Species: Salmonella Typhimurium Negative
- g) reproductive toxicity:
Test: NOAEL - Species: Rat > 250 mg/kg/day - Source: OCSE 414 - Notes: Developmental toxicity
- i) STOT-repeated exposure:
Test: NOAEL - Route: Oral - Species: Rat 30 mg/kg - Source: Dir. 67/548/CEE, Annex V, B.7. - Notes: Exposure Time: 90 days Number of expositions: 1x /day
ethanol - CAS: 64-17-5
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
Test: LC50 - Route: Inhalation - Species: Mouse > 20 mg/L - Duration: 4h
1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)-ethanone - CAS: 54464-57-2
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg
- b) skin corrosion/irritation:
Test: NOEL - Route: Skin 47244 µg/cm² - Source: OECD TG 402
Test: Skin Irritant - Route: Skin Positive - Notes: 45% HRIPT
- c) serious eye damage/irritation:
Test: Eye Irritant Negative - Notes: FHSA
- d) respiratory or skin sensitisation:
Test: NESIL - Route: Skin 47200 µg/cm² - Source: OECD TG 402 - Notes: (no expected sensitization induction level)
Test: Skin Sensitization - Route: Skin Positive - Notes: >6% HRIPT
- g) reproductive toxicity:
Test: NOAEL 240 mg/kg - Notes: developmental maternal
- h) STOT-single exposure:
Test: NOAEL 480 mg/kg - Notes: developmental foetal
methenamine - CAS: 100-97-0
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 20000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: OECD 402
- b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Negative - Source: OECD 405
- c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Negative - Source: OECD 405
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Route: Skin - Species: Guinea pig Positive - Source: OECD 406

- e) germ cell mutagenicity:
Test: Bacterial reverse mutation test - Species: Salmonella Typhimurium Negative - Source: OECD 471
- f) carcinogenicity:
Test: Carcinogenicity Negative
- g) reproductive toxicity:
Test: LOAEL - Species: Rat - Notes: ≥ 1500 - ≤ 2500 mg/kg bw/day (F2 - nominal)
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 870.1200
- 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: Metabolic activation: yes - BPL: yes
Test: chromosomal aberration test - Route: In vitro - Species: Human lymphocytes Negative - Source: OECD TG 473 - Notes: Metabolic activation: yes
Test: Mutagenesis - Route: In vitro - Species: Chinese hamster ovary cells Negative - Source: OECD TG 476 - Notes: Metabolic 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
- 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
- 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
- sodium hydroxide - CAS: 1310-73-2
- b) skin corrosion/irritation:
Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive
- c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Positive - Source: OECD TG 405
- d) respiratory or skin sensitisation:
Test: Respiratory Sensitization - Route: In vitro Negative - Notes: ECHA
Test: Skin Sensitization - Route: In vitro Negative - Notes: ECHA
- e) germ cell mutagenicity:
Test: Ames test - Species: Salmonella Typhimurium Negative
- 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 $\geq 0.1\%$

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

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

Sodium N-lauroylsarcosinate

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 32.1 mg/L - Duration h: 96 - Notes: OECD Test Guideline 203 Species: Danio rerio (zebra fish) semi-static Test substance: 30%

Endpoint: EC50 - Species: Daphnia 8.91 mg/L - Duration h: 48 - Notes: OECD Test Guideline 202 Species: Daphnia magna (water flea) static Test substance: 30%

e) Plant toxicity:

Endpoint: ErC50 - Species: Algae 79 mg/L - Duration h: 72 - Notes: OECD Test Guideline 201 Species: Desmodesmus subspicatus (green algae) static Test substance: 30%

Endpoint: EbC50 - Species: Algae 39 mg/L - Duration h: 72 - Notes: OECD Test Guideline 201 Species: Desmodesmus subspicatus (green algae) static Test substance: 30%

Endpoint: NOEC - Species: Algae 9.2 mg/L - Duration h: 72 - Notes: OECD TG 201. Species: Desmodesmus subspicatus

ethanol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 11200 mg/L - Duration h: 96

Endpoint: EC50 - Species: Daphnia > 12300 mg/L - Duration h: 48 - Notes: Species: Daphnia magna

Endpoint: EC50 - Species: Algae > 275 mg/L - Duration h: 72 - Notes: Species: Chlorella vulgaris

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)-ethanone

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1.3 mg/L - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 1.38 mg/L - Duration h: 48

Endpoint: EC50 - Species: Algae = 2.6 mg/L - Duration h: 72

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish = 0.16 mg/L

Endpoint: NOEC - Species: Daphnia = 0.028 mg/L

Endpoint: NOEC - Species: Algae = 2.6 mg/L

methenamine

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 41 mg/L - Duration h: 96 - Notes: Species: Lepomis macrochirus EPA-660/3-75-00 p. 61

Endpoint: EC50 - Species: Daphnia 36 mg/L - Duration h: 48 - Notes: Species: Daphnia magna ASTM

e) Plant toxicity:

Endpoint: EC50 - Species: Algae 3 mg/L - Duration h: 504 - Notes: Species: Selenastrum capricornutum (Algal assay procedure: bottle test. US EPA)

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

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

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

sodium hydroxide

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 189 mg/L - Duration h: 48
Endpoint: EC0 - Species: Daphnia = 40.4 mg/L - Duration h: 48 - Notes: Species:
Ceriodaphnia dubia
Endpoint: LC50 - Species: Fish 125 mg/L - Duration h: 96 - Notes: Species: Gambusia
affinis
Endpoint: LC50 - Species: Fish 45.4 mg/L - Duration h: 96 - Notes: Species
Oncorhynchus mykiss

c) Bacteria toxicity:

Endpoint: EC50 - Species: Bacteria 22 mg/L - Duration h: 0.25 - Notes: Species:
Photobacterium phosphoreum

12.2. Persistence and degradability

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

Biodegradability: Readily biodegradable

Sodium N-lauroylsarcosinate - CAS: 137-16-6

Biodegradability: Readily biodegradable - Duration: 28 d - %: 82 - Notes: ISO 14593

Method: Directive 67/548/EEC Annex V, C.4.B.

ethanol - CAS: 64-17-5

Biodegradability: Readily biodegradable - Test: Solubility in water - Notes: 1000 -
10000 mg/L

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)-ethanone - CAS: 54464-57-2

Biodegradability: Non-readily biodegradable

methenamine - CAS: 100-97-0

Biodegradability: Readily biodegradable - Test: Die-Away Test - Notes: OECD 301A

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

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

Biodegradability: Readily biodegradable - Duration: 28 d - %: 70

12.3. Bioaccumulative potential

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

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05

ethanol - CAS: 64-17-5

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.350000-

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

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 $\geq 0.1\%$

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

ADR-Environmental Pollutant: No

IMDG-Marine pollutant: No

14.6. Special precautions for user

N.A.

14.7. Maritime transport in bulk according to IMO instruments

N.A.

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)

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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

None

15.2. Chemical safety assessment

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

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H330 Fatal if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

H228 Flammable solid.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H301 Toxic if swallowed.

H411 Toxic to aquatic life with long lasting effects.

H290 May be corrosive to metals.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Sol. 2	2.7/2	Flammable solid, Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A

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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
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
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

This safety data sheet has been completely updated in compliance to Regulation 2020/878. 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
Acute Tox. 4, H332	Calculation method
Eye Irrit. 2, H319	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

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.

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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.