

Safety Data Sheet dated 8/11/2022, version 5

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

1.1. Product identifier

Mixture identification

Trade name: PLURAL PLUS

UFI: 8DV0-D0R6-0002-PQS3

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

Recommended use:

Detergent for hard surfaces.

Professional use (SU22) - Washing and cleaning products (PC35)

Uses advised against:

Different uses than recommended. Do not use in combination with other products.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

SUTTER INDUSTRIES s.p.a. - Società con Unico Socio

15060 Borghetto Borbera (AL) Italia

Tel. +39 0143 631.1

Competent person responsible for the safety data sheet:

regulatory.affairs@sutter.it

1.4. Emergency telephone number

+39 0143 631.1 mon-fri 9.00/17.00

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, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P280 Wear eye protection.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire, use a dry powder fire extinguisher to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

Special Provisions:

EUH210 Only for professional use. Safety data sheet available on request.

The product also contains: Perfumes

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

Not Applicable, the product is a mixture.

3.2. Mixtures

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

$\geq 7\% - < 10\%$ 2-BUTOXYETHANOL

REACH No.: 01-2119475108-36, Index number: 603-014-00-0, CAS: 111-76-2, EC:
203-905-0



3.3/2 Eye Irrit. 2 H319



3.2/2 Skin Irrit. 2 H315



3.1/4/Oral Acute Tox. 4 H302



3.1/4/Dermal Acute Tox. 4 H312



3.1/4/Inhal Acute Tox. 4 H332

$\geq 3\% - < 5\%$ ACETONE

REACH No.: 01-2119471330-49, Index number: 606-001-00-8, CAS: 67-64-1, EC:
200-662-2



2.6/2 Flam. Liq. 2 H225



3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H336

EUH066

$\geq 1\% - < 3\%$ PROPAN-2-OL

REACH No.: 01-2119457558-25, Index number: 603-117-00-0, CAS: 67-63-0, EC:
200-661-7



2.6/2 Flam. Liq. 2 H225



3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H336

$\geq 0.1\% - < 0.25\%$ 2-AMINOETHANOL

REACH No.: 01-2119486455-28, Index number: 603-030-00-8, CAS: 141-43-5, EC: 205-483-3

-  3.2/1B Skin Corr. 1B H314
-  3.3/1 Eye Dam. 1 H318
-  3.1/4/Oral Acute Tox. 4 H302
-  3.1/4/Inhal Acute Tox. 4 H332
-  3.1/4/Dermal Acute Tox. 4 H312
-  3.8/3 STOT SE 3 H335
- 4.1/C3 Aquatic Chronic 3 H412

Specific Concentration Limits:
C \geq 5%: STOT SE 3 H335

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

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 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

Acute effects:

Skin and eye irritation for contact

Irritation interior system if swallowed.

Until revision date of this document, are unknown chronic effects from the mixture contact with skin, eyes, inhalation, ingestion.

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:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
 - Suitable extinguishing media:
In case of fire, use a dry powder fire extinguisher to extinguish.
 - Extinguishing media which must not be used for safety reasons:
None in particular.
- 5.2. Special hazards arising from the substance or mixture
 - The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).
 - 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.
 - The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).

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. To converge the product in containment tanks.
- 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.
 - 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.
 - See also section 8 for recommended protective equipment.
 - Advice on general occupational hygiene:
Contaminated clothing should be changed before entering eating areas.
 - Do not eat or drink while working.
- 7.2. Conditions for safe storage, including any incompatibilities
 - Store away from sunlight.
 - Store in a cool and well ventilated place.
 - Store away from heat sources.
 - Do not store in open or unlabeled containers.
 - Always keep in a well ventilated place.

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

Keep away from food, drink and feed.

Incompatible materials:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular, see paragraph 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Until the revision date of this document, no experimental data are available for the mixture. Below, listed occupational exposure limits, if available, for the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

EU - TWA(8h): 98 mg/m³, 20 ppm - STEL: 246 mg/m³, 50 ppm - Notes: Skin

TLV TWA - 20 ppm, A3 - 96,66 mg/m³, A3

TLV STEL - A3

ACETONE - CAS: 67-64-1

EU - TWA(8h): 1210 mg/m³, 500 ppm

ACGIH - TWA(8h): 500 ppm - STEL: 750 ppm - Notes: A4, BEI - URT and eye irr,

CNS impair

PROPAN-2-OL - CAS: 67-63-0

ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr,

CNS impair

2-AMINOETHANOL - CAS: 141-43-5

EU - TWA(8h): 2.5 mg/m³, 1 ppm - STEL: 7.6 mg/m³, 3 ppm - Notes: Skin

ACGIH - TWA(8h): 7.5 mg/m³, 3 ppm - STEL: 15 mg/m³, 6 ppm

DNEL Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the DNEL exposure limits, if available, for the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

Worker Industry: 125 mg/kg - Consumer: 75 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects - Notes: day

Worker Industry: 98 mg/m³ - Consumer: 59 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Consumer: 6.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects - Notes: day

Worker Industry: 246 mg/m³ - Consumer: 147 mg/m³ - Exposure: Human Inhalation -

Frequency: Short Term, local effects

Worker Industry: 89 mg/kg - Consumer: 26.7 mg/kg - Exposure: Human Oral -

Frequency: Short Term, systemic effects - Notes: day

Worker Industry: 89 mg/kg - Consumer: 89 mg/kg - Exposure: Human Dermal -

Frequency: Short Term, systemic effects

Worker Industry: 1091 mg/m³ - Consumer: 426 mg/m³ - Exposure: Human Inhalation -

Frequency: Short Term, systemic effects

ACETONE - CAS: 67-64-1

Worker Industry: 186 mg/kg - Consumer: 62 mg/kg - Exposure: Human Dermal -

Frequency: Long Term (repeated) - Notes: bw/day

Worker Industry: 2420 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term

(acute)

Worker Industry: 1210 mg/m³ - Consumer: 200 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)

Consumer: 62 mg/kg - Exposure: Human Oral - Notes: bw/day

PROPAN-2-OL - CAS: 67-63-0

Worker Industry: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects - Notes: bw/day

Worker Industry: 500 mg/m³ - Consumer: 89 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects - Notes: bw/day

Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

2-AMINOETHANOL - CAS: 141-43-5

Worker Industry: 1 mg/kg - Consumer: 0.24 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 3.3 mg/m³ - Consumer: 2 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)

Consumer: 3.75 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the PNEC exposure limits, if available, for the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

Target: Marine water sediments - Value: 3.46 mg/kg

Target: Soil (agricultural) - Value: 2.33 mg/kg

Target: Marine water - Value: 0.88 mg/l

Target: Microorganisms in sewage treatments - Value: 463 mg/l

Target: Food chain - Value: 20 mg/kg

Target: Fresh Water - Value: 8.8 mg/l

Target: Freshwater sediments - Value: 34.6 mg/kg

Target: Air - Value: 9.1 mg/l

ACETONE - CAS: 67-64-1

Target: Marine water - Value: 1.06 mg/l

Target: Fresh Water - Value: 10.6 mg/l

Target: Microorganisms in sewage treatments - Value: 29.5 mg/l

Target: Marine water sediments - Value: 3.04 mg/kg

Target: Soil (agricultural) - Value: 33.3 mg/l

PROPAN-2-OL - CAS: 67-63-0

Target: Microorganisms in sewage treatments - Value: 2251 mg/l

Target: Marine water sediments - Value: 552 mg/kg

Target: Soil (agricultural) - Value: 28 mg/kg

Target: Marine water - Value: 140.9 mg/l

Target: Air - Value: 140.9 mg/l

2-AMINOETHANOL - CAS: 141-43-5

Target: Marine water - Value: 0.0085 mg/l

Target: Fresh Water - Value: 0.085 mg/l

Target: Air - Value: 0.028 mg/l

Target: Marine water sediments - Value: 0.0434 mg/kg

Target: Soil (agricultural) - Value: 0.0367 mg/kg

Target: Freshwater sediments - Value: 0.434 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/l

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.(EN 166)

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton (EN 14605 in case of splashes or EN 13982 in case of dust)

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (ex. EN 388 - EN 374 protection factor 6, corresponding to a breakthrough time >480 minutes).

Due to great diversity of types, observe the operating instructions of the manufacturer with respect to substances listed in paragraph 3.2.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

The product is not explosive - see paragraph 2.1. The product contains no explosive components.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

The product is flammable.

Environmental exposure controls:

The product is not dangerous for the environment - see section 2.1.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

Appropriate engineering controls:

No further technical checks suitable for your product under normal conditions.

See also section 1.2, section 7 and Exposure Scenario - Annex I of this document.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid	Visual	--
Colour:	light blue	Visual	--
Odour:	Floral	Olfactory	--
Odour threshold:	Evident	Olfactory	--
Melting point/freezing point:	Not Relevant	--	Parameter not relevant for the type of product
Boiling point or initial boiling point and boiling range:	>= 100 °C	--	Estimated value on chemical / physical properties of components
Flammability:	flammable	--	Estimated parameter on chemical / physical properties of components.
Lower and upper explosion limit:	Not Relevant	--	Parameter not relevant for the type of product
Flash point:	27 ° C	ABEL PENSKY	--
Auto-ignition temperature:	Not Relevant	--	Parameter not relevant for the type of product
Decomposition temperature:	Not Relevant	--	Parameter not relevant for the type of product
pH:	< 11,4	Instrumental control	--
Kinematic viscosity:	Not Relevant	--	Parameter not relevant. Not viscous mixture.
Solubility in water:	Total	--	Internal tests
Solubility in oil:	Partial	--	Internal tests
Partition coefficient n-octanol/water (log value):	< 1000	--	Value estimated based on the solubility of the mixture.
Vapour pressure:	Not Relevant	--	Parameter not relevant for the type of product

Density and/or relative density:	0.984 g/ml	Instrumental control	--
Relative vapour density:	Not Relevant	--	Parameter not relevant for the type of product
Particle characteristics:			
Particle size (average and range)	Not Relevant	--	Parameter not relevant for the type of product

- 9.2. Other information
No other relevant information

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Do not use in combination with other products.
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
- 10.2. Chemical stability
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
- 10.3. Possibility of hazardous reactions
In normal conditions no dangerous reactions of the mixture
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
See also section 7.2.
- 10.4. Conditions to avoid
Avoid direct sunlight and exposure to heat sources.
Different uses than recommended. Do not use in combination with other products. See also 1.2 and 7.2
- 10.5. Incompatible materials
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.
- 10.6. Hazardous decomposition products
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
Do not use in combination with other products.

SECTION 11: Toxicological information

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

Toxicological information of the product:

PLURAL PLUS

- a) acute toxicity
Not classified
Based on available data, the classification criteria are not met
- 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:

Below are reported, if available, the toxicological information of the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

- a) acute toxicity
ATE - Oral 1200 mg/kg bw
Test: ATE - Route: Oral = 1200 mg/kg bw
Test: LD50 - Route: Skin - Species: Rabbit = 1100 mg/kg - Source: OECD 402
Test: LC50 - Route: Inhalation - Species: Rat = 523 ppm - Duration: 4h
Test: LD50 - Route: Oral - Species: Rat = 1300 mg/kg
- b) skin corrosion/irritation:
Test: Skin Irritant Yes - Source: UE B.4
- c) serious eye damage/irritation:
Test: Eye Irritant Yes - Source: OCSE 405
- d) respiratory or skin sensitisation:
Test: Skin or Resp. Sensitization No
- e) germ cell mutagenicity:
Test: Mutagenesis Negative
- g) reproductive toxicity:
Test: Reproductive Toxicity Negative

ACETONE - CAS: 67-64-1

- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 5800 mg/kg - Source: OCSE 401
Test: LD50 - Route: Skin - Species: Rat = 15800 mg/kg
Test: LC50 - Route: Inhalation Vapour = 76 mg/l - Duration: 4h
- c) serious eye damage/irritation:
Test: Eye Irritant Yes

PROPAN-2-OL - CAS: 67-63-0

- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 10000 ppm - Duration: 6h
Test: LD50 - Route: Skin - Species: Rabbit > 10000 mg/kg - Notes: bw
 - b) skin corrosion/irritation:
Test: Skin Irritant - Route: Skin - Species: Rabbit No - Source: OECD 404
 - c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Yes - Source: OECD 405
 - d) respiratory or skin sensitisation:
Test: Skin or Resp. Sensitization Negative
 - g) reproductive toxicity:
Test: NOAEL - Route: Oral - Species: Rabbit = 480 mg/kg - Notes: bw/day
- 2-AMINOETHANOL - CAS: 141-43-5

- a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat = 1089 mg/kg - Source: OECD 401
 - Test: LD50 - Route: Skin - Species: Rabbit = 2504 mg/kg - Source: OECD 402
 - Test: LC50 - Route: Inhalation - Species: Rat > 1.3 mg/l - Duration: 6h
 - b) skin corrosion/irritation:
 - Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive
 - c) serious eye damage/irritation:
 - Test: Eye Corrosive - Species: Rabbit Positive
 - d) respiratory or skin sensitisation:
 - Test: Skin or Resp. Sensitization Negative
 - h) STOT-single exposure:
 - It can irritate the respiratory tract.
- 2-BUTOXYETHANOL - CAS: 111-76-2
LD50 (RABBIT) ORAL: 320 MG/KG
- ACETONE - CAS: 67-64-1
LD50 (RABBIT) ORAL: 5300 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.

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

PLURAL PLUS

Not classified for environmental hazards

Based on available data, the classification criteria are not met

2-BUTOXYETHANOL - CAS: 111-76-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1474 mg/l - Duration h: 96 - Notes: Oncorhynchus mykiss

Endpoint: EC50 - Species: Daphnia = 1550 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae = 911 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish > 100 mg/kg - Duration h: 504 - Notes: Brachydanio rerio

Endpoint: NOEC - Species: Daphnia = 100 mg/l - Duration h: 504 - Notes: Daphnia magna

ACETONE - CAS: 67-64-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96 - Notes: Pimephales promelas

Endpoint: EC50 - Species: Daphnia = 8800 mg/l - Duration h: 48 - Notes: Daphnia magna

Species: Microorganisms / Effect on activated sludge: = 1000 mg/l

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 2212 mg/l - Duration h: 672 - Notes: Daphnia magna

PROPAN-2-OL - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 48 - Notes: Leuciscus idus

Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72 - Notes: Scenedesmus subspicatus

2-AMINOETHANOL - CAS: 141-43-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 349 mg/l - Duration h: 96 - Notes: Cyprinus carpio

Endpoint: EC50 - Species: Daphnia = 65 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae = 2.5 mg/l - Duration h: 72 - Notes: Selenastrum capricornutum

Endpoint: NOEC - Species: Algae = 1 mg/l - Duration h: 72 - Notes: Selenastrum capricornutum

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish = 1.2 mg/l - Duration h: 984 - Notes: Oryzias latipes

Endpoint: NOEC - Species: Daphnia = 0.85 mg/l - Duration h: 504 - Notes: Daphnia magna

12.2. Persistence and degradability

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

Biodegradability: Readily biodegradable - Test: OECD 301B - Duration: 28 days - %: 90 - Notes: .

ACETONE - CAS: 67-64-1

Biodegradability: Readily biodegradable - Test: Ready biodegradability in water - Duration: 28 days - %: 91

PROPAN-2-OL - CAS: 67-63-0

Biodegradability: Readily biodegradable - Duration: 10 days - %: 70 - Notes: >70%

2-AMINOETHANOL - CAS: 141-43-5

Biodegradability: Readily biodegradable - Test: OECD 301A - Duration: 21 days - Notes: 90%

The surfactant(s) contained in this preparation complies with the biodegradability criteria laid down in Regulation (EC) No 648/2004 on detergents. All supporting data are kept available to the competent authorities of the Member States and will be provided to those authorities if they so request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

2-BUTOXYETHANOL - CAS: 111-76-2

Bioaccumulation: Not bioaccumulative - Test: . 0.8 - Notes: .

ACETONE - CAS: 67-64-1

Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentration factor 3

PROPAN-2-OL - CAS: 67-63-0

Bioaccumulation: Not bioaccumulative - Test: Log Pow - Partition coefficient 0.05

2-AMINOETHANOL - CAS: 141-43-5

Bioaccumulation: Slightly bioaccumulative

12.4. Mobility in soil

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

Not applicable

12.5. Results of PBT and vPvB assessment

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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

Until the revision date of this document, unknown adverse effects and symptoms towards the environment.

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. Do not discharge into the ground or into drains.

See also section 6

SECTION 14: Transport information



14.1. UN number or ID number

ADR-UN Number:	1993
IATA-UN Number:	1993
IMDG-UN Number:	1993

14.2. UN proper shipping name

ADR-Shipping Name:	FLAMMABLE LIQUID, N.O.S.(PROPAN-2-OL, ACETONE)
IATA-Shipping Name:	FLAMMABLE LIQUID, N.O.S.(PROPAN-2-OL, ACETONE)
IMDG-Shipping Name:	FLAMMABLE LIQUID, N.O.S.(PROPAN-2-OL, ACETONE)

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-E

14.6. Special precautions for user

ADR-Subsidiary hazards:	-
ADR-S.P.:	274 601
ADR-Transport category (Tunnel restriction code):	D/E
IATA-Passenger Aircraft:	355
IATA-Subsidiary hazards:	-
IATA-Cargo Aircraft:	366
IATA-S.P.:	A3
IATA-ERG:	3L
IMDG-S.P.:	223 274 955
IMDG-Subsidiary hazards:	-

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- IMDG-Stowage and handling: Category A
IMDG-Segregation: -
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
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)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
None

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, for instructions on safe mangling you see Sections 7 and 8 and the exposure scenario - Annex I of this document.
A Chemical Safety Assessment has been carried out for the mixture.
No Chemical Safety Assessment has been carried out for the mixture.
Substances for which a Chemical Safety Assessment has been carried out:
None

SECTION 16: Other information

Full text of phrases referred to in Section 3:
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H225 Highly flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

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EUH066 Repeated exposure may cause skin dryness or cracking.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

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. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
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. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
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
Flam. Liq. 3, H226	On basis of test data
Eye Irrit. 2, H319	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.
EC0/10/20/50/100: Effective concentration, for 0/10/20/50/100 percent of test population.
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.



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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.
LC0/10/20/50/100:	Lethal concentration, for 0/10/20/50/100 percent of test population.
LD0/10/20/50/100:	Lethal dose, for 0/10/20/50/100 percent of test population.
NOEC:	No Observed Effect Concentration
NOAEL(R)/N	No Observed Adverse Effect Level(Repeated)/Concentration
OECD:	Organisation for Economic Co-operation and Development
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.

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ANNEX I
PROFESSIONAL PRODUCT – DETERGENT FOR HARD SURFACES

Title of exposure scenario	
Detergent for general cleaning: Manual process.	
Use description	
Sector Use	SU22 – Professional use
Product Category	PC35 – Washing and cleaning products (including solvent based products)
Description of activities/process considered on exposure scenario.	
Dilute with water as specified on the label, if necessary.	
Use following the use instruction as specified on the label.	
Leave on.	
Rinse, if necessary.	
Frequency and duration	
Use phase	- 1 time a day for daily cleaning detergents - Periodical for specific detergents
Relevant limit values of ingredients, if available, are stated in section 8 of the SDS.	
Physical appearance and concentration	
Liquid. To dilute or ready to use.	
In section 2 of the SDS of product and on the label, the classification of mixture is provided.	
Mixture classification is based on ingredients classification and on chemical/physical properties stated in section 9 of the SDS of product.	
Use conditions	
Room temperature	
Good general ventilation at workplace is sufficient.	
Protection	
See section 8 of the SDS of product to more information on PPE.	Training of worker to use and maintenance of PPE is supposed.
Don't eat or drink, don't smoke.	Avoid contact with damaged skin.
No open flame.	Do not use in combination with other products
Wash hand after use.	
In case of accidental release: dilute with water and dry.	
See section 6 of the SDS in case of accidental release	
Follow use instruction as specified on the label or on technical sheet. Use good occupational hygiene practices as specified in section 7 on the SDS.	
Environmental measures	
See section 6 of the SDS in case of accidental release	
See section 12 of the SDS for ecotoxicological information of mixture and dangerous ingredients.	
See section 13 of the SDS for disposal considerations.	

Note:

SDS: Safety Data Sheet

PPE: Personal Protection Equipment