

ANTI LICHEN

**SAFETY DATA SHEET**

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

**SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name : ANTI LICHEN  
Product code : 304105-304115.

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

Antialgae, antilichens  
Professional use.

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

Registered company name : IPC.  
Address : 10 Quai Malbert.29200.BREST.FRANCE.  
Telephone : +33 (0)2 98 43 45 44. Fax : .  
ipc@groupe-ipc.com

**1.4. Emergency telephone number : +33 (0)1 45 42 59 59.**

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

**SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Skin irritation, Category 2 (Skin Irrit. 2, H315).  
Eye irritation, Category 2 (Eye Irrit. 2, H319).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

**2.2. Label elements**

Biocidal detergent mixture (see section 15).

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS07

Signal Word :

WARNING

Hazard statements :

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements - Prevention :

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/eye protection/face protection.

Precautionary statements - Response :

P302 + P352 IF ON SKIN: Wash with plenty of water.

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

P332 + P313 If skin irritation occurs: Get medical advice/attention.

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

Precautionary statements - Disposal :

P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

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**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances  $\geq 0.1\%$  with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

**Composition :**

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 603-096-00-8 CAS: 112-34-5 EC: 203-961-6 REACH: 01-2119475104-44  2-(2-BUTOXYETHOXY)ETHANOL	GHS07 Wng Eye Irrit. 2, H319	[1] [XVII]	2.5 $\leq$ x % < 5
INDEX: 603 002 00 5 CAS: 64-17-5 EC: 200-578-6 REACH: 01-2119457610-43  ETHANOL	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1]	2.5 $\leq$ x % < 5
INDEX: 612 131 00 6 CAS: 7173-51-5 EC: 230-525-2  DIDECYLDIMETHYLAMMONIUM CHLORIDE	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Aquatic Chronic 2, H411 Aquatic Acute 1, H400 M Acute = 10		1 $\leq$ x % < 2.5
INDEX: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH: 01-2119457558-25  PROPAN-2-OL	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1]	1 $\leq$ x % < 2.5
INDEX: 603 030 00 8 CAS: 141-43-5 EC: 205-483-3 REACH: 01-2119486455-28  2-AMINOETHANOL	GHS07, GHS05 Dgr Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Acute Tox. 4, H332 STOT SE 3, H335 Aquatic Chronic 3, H412	[1]	0 $\leq$ x % < 1
INDEX: 606-002-00-3 CAS: 78-93-3 EC: 201-159-0  BUTANONE	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH:066	[1]	0 $\leq$ x % < 0.1
INDEX: 77 92 9 CAS: 77-92-9 EC: 201-069-1 REACH: 01-2119457026-42  CITRIC ACID	GHS07 Wng Eye Irrit. 2, H319	[1]	0 $\leq$ x % < 0.1

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INDEX: I601029007A CAS: 5989-27-5 EC: 227-813-5 REACH: 01-2119529223-47  D-LIMONENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 Aquatic Acute 1, H400 M Acute = 1	[1]	0 <= x % < 0.1
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**Specific concentration limits:**

Identification	Specific concentration limits	ATE
INDEX: 603_002_00_5 CAS: 64-17-5 EC: 200-578-6 REACH: 01-2119457610-43  ETHANOL		inhalation: ATE = 51 mg/l 4h  oral: ATE = 10470 mg/kg BW
INDEX: 612_131_00_6 CAS: 7173-51-5 EC: 230-525-2  DIDECYLDIMETHYLAMMONIUM CHLORIDE		oral: ATE = 658 mg/kg BW
INDEX: 603_030_00_8 CAS: 141-43-5 EC: 205-483-3 REACH: 01-2119486455-28  2-AMINOETHANOL	STOT SE 3: H335 C>= 5%	oral: ATE = 1089 mg/kg BW
INDEX: 77_92_9 CAS: 77-92-9 EC: 201-069-1 REACH: 01-2119457026-42  CITRIC ACID		oral: ATE = 5400 mg/kg BW

**Information on ingredients :**

(Full text of H-phrases: see section 16)

[XVII] Restricted substance under Regulation (EC) No. 1907/2006 (REACH), Annex XVII.

[1] Substance for which maximum workplace exposure limits are available.

**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. description of first aid measures**

**In the event of exposure by inhalation :**

In the event of massive inhalation, remove the person to fresh air and keep warm and at rest.

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

**In the event of splashes or contact with skin :**

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

**In the event of swallowing :**

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

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**SECTION 5 : FIREFIGHTING MEASURES**

Non-flammable.

**5.1. Extinguishing media**

**Suitable methods of extinction**

In the event of a fire, use :

- sprayed water or water mist
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO<sub>2</sub>)

**Unsuitable methods of extinction**

In the event of a fire, do not use :

- water jet

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

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

**5.3. Advice for firefighters**

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

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**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

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

Consult the safety measures listed under headings 7 and 8.

**For non first aid worker**

Avoid any contact with the skin and eyes.

**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

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

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.

Clean preferably with a detergent, do not use solvents.

**6.4. Reference to other sections**

No data available.

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**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

**Fire prevention :**

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

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**Recommended equipment and procedures :**

For personal protection, see section 8.  
Observe precautions stated on label and also industrial safety regulations.  
Avoid skin and eye contact with this mixture.  
Packages which have been opened must be reclosed carefully and stored in an upright position.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

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

Keep out of reach of children.

**Storage**

Keep the container tightly closed in a dry, well-ventilated place.  
The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

**Packaging**

Always keep in packaging made of an identical material to the original.

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

No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Occupational exposure limits :**

- European Union (2022/431, 2019/1831, 2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m <sup>3</sup> :	VME-ppm :	VLE-mg/m <sup>3</sup> :	VLE-ppm :	Notes :
112-34-5	67.5	10	101.2	15	-
141-43-5	2.5	1	7.6	3	Peau
78-93-3	600	200	900	300	-

- Germany - AGW (BAuA - TRGS 900, 02/2022) :

CAS	VME :	VME :	Excess	Notes
112-34-5		10 ppm 67 mg/m <sup>3</sup>		1.5 (I)
64-17-5		200 ppm 380 mg/m <sup>3</sup>		4(II)
67-63-0		200 ppm 500 mg/m <sup>3</sup>		2(II)
141-43-5		0.2 ppm 0.5 mg/m <sup>3</sup>		1(I)
78-93-3		200 ppm 600 mg/m <sup>3</sup>		1(I)
77-92-9		2E mg/m <sup>3</sup>		2 (I)
5989-27-5		5 ppm 28 mg/m <sup>3</sup>		4(II)

- Belgium (Royal decree of 11/05/2021) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
112-34-5	10 ppm 67.5 mg/m <sup>3</sup>	15 ppm 101.2 mg/m <sup>3</sup>			
64-17-5	1000 ppm 1907 mg/m <sup>3</sup>				
67-63-0	200 ppm 500 mg/m <sup>3</sup>	400 ppm 1000 mg/m <sup>3</sup>			
141-43-5	1 ppm 2.5 mg/m <sup>3</sup>	3 ppm 7.6 mg/m <sup>3</sup>		D	
78-93-3	200 ppm 600 mg/m <sup>3</sup>	300 ppm 900 mg/m <sup>3</sup>			

- France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021) :

CAS	VME-ppm :	VME-mg/m <sup>3</sup> :	VLE-ppm :	VLE-mg/m <sup>3</sup> :	Notes :	TMP No :
112-34-5	10	67.5	15	101.2	-	-
64-17-5	1000	1900	5000	9500	-	84

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67-63-0	-	-	400	980	-	84
141-43-5	1	2.5	3	7.6	-	49. 49 Bis
78-93-3	200	600	300	900	*	84

- Switzerland (Suva 2021) :

CAS	VME	VLE	Valeur plafond	Notations
112-34-5	10 ppm 67 mg/m <sup>3</sup>	15 ppm 101 mg/m <sup>3</sup>		
64-17-5	500 ppm 960 mg/m <sup>3</sup>	1000 ppm 1920 mg/m <sup>3</sup>		
67-63-0	200 ppm 500 mg/m <sup>3</sup>	400 ppm 1000 mg/m <sup>3</sup>		
141-43-5	2 ppm 5 mg/m <sup>3</sup>	4 ppm 10 mg/m <sup>3</sup>		
78-93-3	200 ppm 590 mg/m <sup>3</sup>	200 ppm 590 mg/m <sup>3</sup>		
77-92-9	2 ppm	4 ppm		
5989-27-5	7 ppm 40 mg/m <sup>3</sup>	14 ppm 80 mg/m <sup>3</sup>		

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
112-34-5	10 ppm 67.5 mg/m <sup>3</sup>	15 ppm 101.2 mg/m <sup>3</sup>			
64-17-5	1000 ppm 1920 mg/m <sup>3</sup>				
67-63-0	400 ppm 999 mg/m <sup>3</sup>	500 ppm 1250 mg/m <sup>3</sup>			
141-43-5	1 ppm 2.5 mg/m <sup>3</sup>	3 ppm 7.6 mg/m <sup>3</sup>		Sk	
78-93-3	200 ppm 600 mg/m <sup>3</sup>	300 ppm 899 mg/m <sup>3</sup>		Sk. BMGV	

**Derived no effect level (DNEL) or derived minimum effect level (DMEL):**

2-AMINOETHANOL (CAS: 141-43-5)

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
1 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term local effects.  
3.3 mg of substance/m<sup>3</sup>

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Long term systemic effects.  
3.75 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
0.24 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term local effects.  
2 mg of substance/m<sup>3</sup>

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

**Final use:**

Exposure method:  
Potential health effects:

**Workers.**

Dermal contact.  
Long term systemic effects.

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DNEL : 888 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 500 mg of substance/m<sup>3</sup>

**Final use:** **Consumers.**  
Exposure method: Ingestion.  
Potential health effects: Long term systemic effects.  
DNEL : 26 mg/kg body weight/day

Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 319 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 89 mg of substance/m<sup>3</sup>

**ETHANOL (CAS: 64-17-5)**

**Final use:** **Workers.**  
Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 343 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Short term local effects.  
DNEL : 1900 mg of substance/m<sup>3</sup>

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 950 mg of substance/m<sup>3</sup>

**Final use:** **Consumers.**  
Exposure method: Ingestion.  
Potential health effects: Short term systemic effects.  
DNEL : 87 mg/kg body weight/day

Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 206 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Short term local effects.  
DNEL : 950 mg of substance/m<sup>3</sup>

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 114 mg of substance/m<sup>3</sup>

**Predicted no effect concentration (PNEC):**

**CITRIC ACID (CAS: 77-92-9)**

Environmental compartment: Soil.  
PNEC : 33.1 mg/kg

Environmental compartment: Fresh water sediment.  
PNEC : 34.6 mg/kg

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Environmental compartment: PNEC :	Marine sediment. 3.46 mg/kg
2-AMINOETHANOL (CAS: 141-43-5)	
Environmental compartment: PNEC :	Soil. 0.035 mg/kg
Environmental compartment: PNEC :	Fresh water. 0.085 mg/l
Environmental compartment: PNEC :	Sea water. 0.0085 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 0.025 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 0.425 mg/kg
Environmental compartment: PNEC :	Marine sediment. 0.0425 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 100 mg/l
PROPAN-2-OL (CAS: 67-63-0)	
Environmental compartment: PNEC :	Soil. 28 mg/kg
Environmental compartment: PNEC :	Fresh water. 140.9 mg/l
Environmental compartment: PNEC :	Sea water. 140.9 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 140.9 mg/l
Environmental compartment: PNEC :	Waste water treatment plant. 2251 mg/l
ETHANOL (CAS: 64-17-5)	
Environmental compartment: PNEC :	Soil. 0.63 mg/kg
Environmental compartment: PNEC :	Fresh water. 0.96 mg/l
Environmental compartment: PNEC :	Sea water. 0.79 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 2.75 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 3.6 mg/kg
Environmental compartment: PNEC :	Marine sediment. 2.9 mg/kg



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Environmental compartment:  
PNEC :

Waste water treatment plant.  
580 mg/l

### 8.2. Exposure controls

#### Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

#### - Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

#### - Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))

#### - Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Suitable type of protective boots :

In the event of minor spatter, wear protective boots or half-boots against chemical risks in accordance with standard EN13832-2.

In the event of prolonged contact, wear boots or half-boots with liquid-chemical-resistant and waterproof soles and uppers in accordance with standard EN13832-3.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

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

#### Physical state

Physical state : Fluid liquid.

#### Colour

Yellow

#### Odour

Odour threshold : Not stated.

Pine

#### Melting point

Melting point/melting range : Not specified.

#### Freezing point

Freezing point / Freezing range : Not stated.

#### Boiling point or initial boiling point and boiling range

Boiling point/boiling range : Not specified.

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**Flammability**

Flammability (solid, gas) : Not stated.

**Lower and upper explosion limit**

Explosive properties, lower explosivity limit (%) : Not stated.

Explosive properties, upper explosivity limit (%) : Not stated.

**Flash point**

Flash point interval : Not relevant.

**Auto-ignition temperature**

Self-ignition temperature : Not specified.

**Decomposition temperature**

Decomposition point/decomposition range : Not specified.

**pH**

pH : 11.10 .  
Slightly basic.

pH (aqueous solution) : Not stated.

**Kinematic viscosity**

Viscosity : Not stated.

**Solubility**

Water solubility : Soluble.

Fat solubility : Not stated.

**Partition coefficient n-octanol/water (log value)**

Partition coefficient: n-octanol/water : Not stated.

**Vapour pressure**

Vapour pressure (50°C) : Not relevant.

**Density and/or relative density**

Density : 0.996 +/- 0.05  
Method for determining the density :  
ISO 649-2 (Laboratory glassware - Density hydrometers for general purposes  
- Part 2: Test methods and use).

**Relative vapour density**

Vapour density : Not stated.

**9.2. Other information**

No data available.

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

No data available.

**9.2.2. Other safety characteristics**

No data available.

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**SECTION 10 : STABILITY AND REACTIVITY**

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

**10.4. Conditions to avoid**

Avoid :

- frost
- heat

**10.5. Incompatible materials**

Keep away from :

- acids

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**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

**SECTION 11 : TOXICOLOGICAL INFORMATION**

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

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Splashes in the eyes may cause irritation and reversible damage

**11.1.1. Substances**

**Acute toxicity :**

CITRIC ACID (CAS: 77-92-9)

Oral route :

LD50 = 5400 mg/kg bodyweight/day

Species : Mouse

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route :

LD50 > 2000 mg/kg bodyweight/day

Species : Rat

2-AMINOETHANOL (CAS: 141-43-5)

Oral route :

LD50 = 1089 mg/kg bodyweight/day

Species : Rat

OECD Guideline 401 (Acute Oral Toxicity)

DIDECYLDIMETHYLAMMONIUM CHLORIDE (CAS: 7173-51-5)

Oral route :

LD50 = 658 mg/kg bodyweight/day

Species : Rat

Dermal route :

LD50 > 2000 mg/kg bodyweight/day

Species : Rat

ETHANOL (CAS: 64-17-5)

Oral route :

LD50 = 10470 mg/kg bodyweight/day

Species : Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route :

LD50 > 2000 mg/kg bodyweight/day

Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (n/a) :

LC50 = 51 mg/l

Species : Rat

Duration of exposure : 4 h

**11.1.2. Mixture**

No toxicological data available for the mixture.

**11.2. Information on other hazards**

**SECTION 12 : ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**12.1.1. Substances**

2-AMINOETHANOL (CAS: 141-43-5)

Fish toxicity :

LC50 = 349 mg/l

Species : Cyprinus carpio

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	Duration of exposure : 96 h
	NOEC = 1.2 mg/l Species : <i>Oryzias latipes</i>
Crustacean toxicity :	EC50 = 65 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 48 h
	NOEC = 0.85 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 21 days OECD Guideline 211 ( <i>Daphnia magna</i> Reproduction Test)
Algae toxicity :	ECr50 = 2.5 mg/l Species : <i>Scenedesmus capricornutum</i> Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)
ETHANOL (CAS: 64-17-5)	
Fish toxicity :	LC50 = 13000 mg/l Species : <i>Oncorhynchus mykiss</i> Duration of exposure : 96 h OECD Guideline 203 (Fish, Acute Toxicity Test)
Crustacean toxicity :	EC50 = 5012 mg/l Species : <i>Ceriodaphnia dubia</i> Duration of exposure : 48 h
DIDECYLDIMETHYLAMMONIUM CHLORIDE (CAS: 7173-51-5)	
Fish toxicity :	LC50 = 0.97 mg/l Factor M = 1 Species : <i>Brachydanio rerio</i> Duration of exposure : 96 h
Crustacean toxicity :	EC50 = 0.06 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 48 h
Algae toxicity :	ECr50 = 0.12 mg/l Species : <i>Scenedesmus capricornutum</i> Duration of exposure : 72 h

### 12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

### 12.2. Persistence and degradability

The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of Member States and will be provided with their request or at the request of a detergent manufacturer.

#### 12.2.1. Substances

CITRIC ACID (CAS: 77-92-9)	
Biodegradability :	Rapidly degradable.
2-AMINOETHANOL (CAS: 141-43-5)	
Biodegradability :	Rapidly degradable.
DIDECYLDIMETHYLAMMONIUM CHLORIDE (CAS: 7173-51-5)	
Biodegradability :	Rapidly degradable.

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ETHANOL (CAS: 64-17-5)

Biodegradability :

Rapidly degradable.

### 12.3. Bioaccumulative potential

#### 12.3.1. Substances

DIDECYLDIMETHYLAMMONIUM CHLORIDE (CAS: 7173-51-5)

Bioaccumulation :

BCF = 81

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

No data available.

### 12.6. Endocrine disrupting properties

No data available.

### 12.7. Other adverse effects

No data available.

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## SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

### 13.1. Waste treatment methods

Do not pour into drains or waterways.

#### Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

#### Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

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## SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

### 14.1. UN number or ID number

-

### 14.2. UN proper shipping name

-

### 14.3. Transport hazard class(es)

-

### 14.4. Packing group

-

### 14.5. Environmental hazards

-

### 14.6. Special precautions for user

-

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

-

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## SECTION 15: Regulatory information

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

#### Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No 1272/2008 amended and its amendments EU . (ATP)

#### Container information:

No data available.

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### Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture contains at least one restricted substance under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): <https://echa.europa.eu/substances-restricted-under-reach>. Please refer to Section 3 to identify the substance involved.

### Explosives precursors :

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

### Particular provisions :

No data available.

### Labelling for detergents (EC Regulation No. 648/2004,907/2006) :

- less than 5 % : non-ionic surfactants
- disinfectants
- perfumes
- allergenic fragrances :  
d-limonene

### Labelling for biocidal products (Regulation (UE) n° 528/2012) :

Name	CAS	%	Product-type
DIDECYLDIMETHYLAMMONIUM CHLORIDE	7173-51-5	20 g/kg	02
ETHANOL	64-17-5	28.7 g/kg	02

Product-type 2 : Disinfectants and algaeicides not intended for direct application to humans or animals.

### 15.2. Chemical safety assessment

No data available.

## SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Changes from the previous version :

- Section 15

### Wording of the phrases mentioned in section 3 :

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.  
LC50 : The concentration of a test substance resulting in 50% lethality in a given period.  
EC50 : The effective concentration of substance that causes 50% of the maximum response.  
ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.  
NOEC : The concentration with no observed effect.  
REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.  
ATE : Acute Toxicity Estimate

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BW : Body Weight  
DNEL : Derived No-Effect Level  
PNEC : Predicted No-Effect Concentration  
UFI : Unique formulation identifier.  
STEL : Short-term exposure limit  
TWA : Time Weighted Averages  
TMP : French Occupational Illness table  
TLV : Threshold Limit Value (exposure)  
AEV : Average Exposure Value.  
ADR : European agreement concerning the international carriage of dangerous goods by Road.  
IMDG : International Maritime Dangerous Goods.  
IATA : International Air Transport Association.  
ICAO : International Civil Aviation Organisation  
RID : Regulations concerning the International carriage of Dangerous goods by rail.  
WGK : Wassergefährdungsklasse (Water Hazard Class).  
GHS07 : Exclamation mark  
PBT: Persistent, bioaccumulable and toxic.  
vPvB : Very persistent, very bioaccumulable.  
SVHC : Substances of very high concern.