SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

CLEAMEN 235

Date of issue: **14. 03. 2025** Version: **1.0**

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

1.1. Product identifier

Product Name

CLEAMEN 235

UFI code

UFI: F0X0-D0YP-D00X-N1NS

Product code

None.

Mixture description

An aqueous solution.

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

Identified uses

Liquid rinsing and polishing product to be used in all types of dish washers. Reliable for all types of materials. Professional use.

Uses advised against

Not known. It is recommended to use it only for the intended use. Other uses may expose users to unpredictable risks.

1.3. Details of the supplier of the safety data sheet

CORMEN s.r.o.
Věchnov 73
593 01
Czech Republic
Tel.: +420 566 550 961
Fax: +420 566 551 822
e-mail address for a competent person responsible for the SDS: info@cormen.cz

1.4. Emergency telephone number

112 (General emergency phone).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture **is classified as hazardous** according to regulation 1272/2008/EC.

Classification according to 1272/2008/EC

Eye Dam. 1; H318

Full text of classifications and H-phrases: see section 16.

The most important adverse physical, human health and environmental effects

Causes serious eye damage.

2.2. Label elements

Hazard pictograms



Signal word

Danger.

Substances of the mixture to be placed on the label

Contains Undecanol, branched and linear, ethoxylated, propoxylated (≥ 2.5 moles EO/PO).

Hazard statements

H318	Causes serious eye damage.

Precautionary statements

P280	Wear eye protection/face 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.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/container by handing it over to a collection yard or sorted waste.

Supplemental hazard information

Mandatory additional information is not required according to CLP regulation.

Composition according to regulation 648/2004/EC on detergents: < 5 % non-ionic surfactants, preservation agents (BENZYL ALCOHOL, METHYLCHLOROISOTHIAZOLINONE AND METHYLISOTHIAZOLINONE).

2.3. Other hazards

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH regulation. Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

3.2.1. Substances of a mixture classified as hazardous

Identification of substance	Content wt. %	Classification according to 1272/2008/EC
Propan-2-ol; Isopropyl alcohol; Isopropanol		

CAS Number EC Number Index Number Registration Number	67-63-0 200-661-7 603-117-00-0 01-2119457558-25-XXXX	1 - < 10	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Undecanol, branched and linear, ethoxylated, propoxylated (≥ 2.5 moles EO/PO)			
CAS Number EC Number Index Number Registration Number	not given 940-634-3 not given is not subject to registration, it is a polymer	1 - < 10	Acute Tox. 4; H302 Eye Dam. 1; H318 ATE_{oral} = 500 mg/kg bw
Citric acid monohydrate			
CAS Number EC Number Index Number Registration Number	5949-29-1 201-069-1 607-750-00-3 01-2119457026-42-XXXX	1 - < 5	Eye Irrit. 2; H319 STOT SE 3; H335
Ethanediol; Ethylene glycol			
CAS Number EC Number Index Number Registration Number	107-21-1 203-473-3 603-027-00-1 01-2119456816-28-XXXX	< 0.001	Acute Tox. 4; H302 STOT RE 2; H373 (kidney) (oral) ATE_{oral} = 500 mg/kg bw

Full text of classifications and H-phrases: see section 16.

SECTION 4: First aid measures

In all cases keep the victim at physical and mental rest and warm. In case of doubt or if symptoms persist, seek medical attention. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Protect yourself during rescue work.

4.1. Description of first aid measures

Inhalation

Interrupt the exposure, move the person to the fresh air. In case of persistent nausea, seek medical advice.

Skin contact

Remove contaminated clothing, shoes, and wash affected skin thoroughly with water (preferably lukewarm) and soap. Do not use solvents or thinners. If the problem persists, seek medical advice.

Eye contact

Rinse with a gentle stream of water for at least 15 minutes. Keep your eyelids wide open with your thumb and forefinger. If the affected person is wearing contact lenses, remove them before rinsing eyes if it is easy. Seek medical advice.

Ingestion

Rinse your mouth and then drink plenty of water. Do not induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Seek medical advice.

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

Are not known.

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

Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Small fire:

Carbon dioxide CO_2, dry extinguishing agent, sand or earth, alcohol-resistant foam.

Extensive fire:

Fragmented water streams (water mist), alcohol-resistant foam.

Unsuitable extinguishing media

Solid streams of water may be ineffective.

5.2. Special hazards arising from the substance or mixture

In case of fire extinguishing prevent leakage of water and rest of product into drains. Collect them separately and dispose of safely in accordance with current legislation and applicable local regulations.

In case of fires, hazardous combustion gases are formed: carbon oxides and products of incomplete combustion.

5.3. Advice for firefighters

Stop further leakage of product if possible. Spilled product, which does not burn, cover with sand or foam. Move containers and barrels away from the fire to a safe place, if possible. Cool all affected containers down with flooding quantities of water. If the fire can´t be extinguished - evacuate the premises.

In case of fire, wear suitable respiratory protective equipment and fire-fighting suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes, use suitable protective equipment and clothing, see Section 8. Ensure adequate ventilation. Avoid formation of vapour and aerosol. At the point of leakage, prevent the movement of unauthorized persons.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. If this cannot be avoided, inform the competent authorities (police and firefighters) immediately.

6.3. Methods and material for containment and cleaning up

According to the amount of spilled liquid, drain away the substance (large spillage) or in case of small spillage, absorb it with suitable absorbent (vermiculite, dry sand), put into labelled closed containers and dispose of them accordingly to Section 13. Flush residues with water and collect it for waste disposal. Do not use solvents or dispersants unless instructed by an expert or government authority.

If container is damaged, remove the content to the new undamaged container and label it properly again.

6.4. Reference to other sections

Refer also to the provisions of sections 7, 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Personal protection see Section 8. Ensure good ventilation to prevent formation of vapour and aerosol.

Smoking, eating and drinking should be prohibited at the place of use. Keep safety regulations for handling chemicals. Take off contaminated clothing and protective equipment before entering the dining area. Do not use dirty clothing. After work wash yourself carefully with warm water and soap, take a shower. Use protective cream.

7.2. Conditions for safe storage, including any incompatibilities

Store in original, tightly closed containers, in a dry, cool and well-ventilated place at room temperature.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

Do not store together with incompatible materials (see subsection 10.5), food, drink and feed.

7.3. Specific end use(s)

See subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure limit value

Ethandiol CAS: 107-21-1

Limit values - Eight hours		Limit values - Short-term		Note
52 mg/m^3	20 ppm	104 mg/m^3	40 ppm	Skin

8.1.2. Biological limit values

Not determined in EU.

8.1.3. DNEL and PNEC values

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

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	500 mg/m^3
Workers	Inhalation	Systemic effect	Acute/Short term	1 000 mg/m^3
Workers	Dermal	Systemic effect	Long term	888 mg/kg/day
General population	Inhalation	Systemic effect	Long term	89 mg/m^3
General population	Inhalation	Systemic effect	Acute/Short term	178 mg/m^3
General population	Dermal	Systemic effect	Long term	319 mg/kg/day
General population	Oral	Systemic effect	Long term	26 mg/kg/day
General population	Oral	Systemic effect	Acute/Short term	51 mg/kg/day

PNEC - not available

Citric acid monohydrate ES: 201-069-1

DNEL - not available

PNEC - not available

Ethanediol CAS: 107-21-1

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Local effect	Long term	35 mg/m^3
Workers	Dermal	Systemic effect	Long term	106 mg/kg/day
General population	Inhalation	Local effect	Long term	7 mg/m^3
General population	Dermal	Systemic effect	Long term	53 mg/kg/day

PNEC - not yet available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use only in well-ventilated areas.

Observe usual safety precautions for working with chemicals. The degree of effectiveness of personal protective equipment depends on temperature and ventilation levels.

8.2.2. Individual protection measures, such as personal protective equipment

Do not eat, drink or smoke. After work, wash thoroughly with warm water and soap and take a shower. Use protective cream. Do not soiled protective equipment to wash, do not use solvents.

Eye/face protection

Wear safety glasses or face shield (EN 166, EN 149+A1).

Skin protection - hand protection

Wear protective gloves when manufacturing and handling the product (EN 374-1, EN 374-2).

The selection of the glove material on consideration of the breakthrough time, permeability, degradation and next relevant factors; other chemicals that may come into contact, physical requirements (cut and puncture protection, dexterity, thermal protection), possible body reactions to the glove material and the glove supplier's instructions and specifications. In case of repeated use of gloves, clean and keep them in a well-ventilated place before taking off.

Skin protection - other

Suitable protective working clothing and protective footwear.

Respiratory protection

Not necessary in case of compliance concentration limits (if they were exceeded, use respiratory protection). In the event of an accident or a fire use self-contained breathing apparatus.

Thermal hazards

In normal use is not necessary protective equipment to be worn for materials that represent a thermal hazard.

8.2.3. Environmental exposure controls

Uncontrolled release of the mixture into environment is to be avoided. Keep the emission limits according to national legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Mixture

Physical state	Liquid.
Colour	Colourless.
Odour	Odourless.

Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	82 °C
Flammability	Not determined.
Lower explosion limit	Not determined for the mixture, values are given for substances classified as flammable liquids.
Upper explosion limit	Not determined for the mixture, values are given for substances classified as flammable liquids.
Flash point	46 °C.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined, the mixture does not contain self-reactive substances or organic peroxides or other substances which may decompose.
pH	2.0 - 3.0.
Kinematic viscosity	Not determined, the mixture does not contain a substance classified as aspiration toxic, or the sum of the concentrations of substances classified as aspiration toxic is less than 10 wt. %.
Solubility	Miscible.
Partition coefficient n-octanol/water (log value)	Does not apply to mixture.
Vapour pressure	43 hPa.
Density and/or relative density	D_4^{20} = 1.
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.
Propan-2-ol	CAS: 67-63-0
Physical state	Liquid.
Colour	Colorless.
Odour	Not determined.
Melting point/freezing point	-88.5 °C (literature).
Boiling point or initial boiling point and boiling range	82.3 °C (literature).
Flammability	Highly flammable liquid.
Lower explosion limit	2 vol. % (literature).
Upper explosion limit	13 vol. % (literature).
Flash point	11.7 °C (literature).
Auto-ignition temperature	399 - 455.6 °C (literature).
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined.

Kinematic viscosity	Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon.
Solubility	Miscible with water.
Partition coefficient n-octanol/water (log value)	log Pow = 0.05 (25 °C, literature).
Vapour pressure	Not determined.
Density and/or relative density	785.5 kg/m^3 (20 °C, literature).
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.
Citric acid monohydrate	ES: 201-069-1
Physical state	Solid.
Colour	White.
Odour	Odourless.
Melting point/freezing point	ca. 153 °C (literature).
Boiling point or initial boiling point and boiling range	Not determined, substance decomposes.
Flammability	The substance is not classified as flammable (ECSIS Burning Test)
Lower explosion limit	Does not apply to solid.
Upper explosion limit	Does not apply to solid.
Flash point	Does not apply to solid.
Auto-ignition temperature	Does not apply to solid.
Decomposition temperature	Not determined.
pH	Not determined.
Kinematic viscosity	Does not apply to solid.
Solubility	592 g/l (20 °C, literature).
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure	0 Pa (25 °C, literature).
Density and/or relative density	D_4^{20} = 1.67 (literature).
Relative vapour density	Does not apply to solid.
Particle characteristics	Not determined.
Ethanediol	CAS: 107-21-1
Physical state	Liquid.
Colour	Colourless.
Odour	Odourless.
Melting point/freezing point	-12.69 °C (literature).
Boiling point or initial boiling point and boiling range	197.4 °C (literature).

Flammability	The substance is not classified as flammable, pyrophoric or emit flammable gases under standard conditions.
Lower explosion limit	Not determined.
Upper explosion limit	Not determined.
Flash point	115 °C (literature).
Auto-ignition temperature	412 °C (literature).
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined.
Kinematic viscosity	Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon.
Solubility	Miscible.
Partition coefficient n-octanol/water (log value)	log Pow = -1.36 (literature).
Vapour pressure	100 Pa (51.1 °C, literature). 1 kPa (86.1 °C, literature). 10 kPa (132.5 °C, literature). 100 kPa (196.9 °C, literature).
Density and/or relative density	1.11 g/cm^3 (DIN 51557).
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Mixture

Explosives

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

The mixture is not classified as a flammable liquid according to the negative result of the sustained burning test according to ČSN EN ISO 9038.

Flammable solids
It is not solid.
Self-reactive substances and mixtures
Data for the mixture are not available. The mixture does not contain substances classified as self-reactive substances or explosives or organic peroxides or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Pyrophoric liquids
Data for the mixture are not available. The mixture does not contain substances classified as pyrophoric liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Pyrophoric solids
It is not solid.
Self-heating substances and mixtures
Data for the mixture are not available. The mixture does not contain substances classified as self-heating or pyrophoric substances or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Substances and mixtures, which emit flammable gases in contact with water
Data for the mixture are not available. The mixture does not contain substances classified as substances, which emit flammable gases in contact with water or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Oxidising liquids
Data for the mixture are not available. The mixture does not contain substances classified as oxidising liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Oxidizing solids
It is not solid.
Organic peroxides
Data for the mixture are not available. The mixture does not contain substances classified as organic peroxides or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Corrosive to metals
Data for the mixture are not available. The mixture does not contain substances classified as corrosive to metals or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Desensitised explosives
Data for the mixture are not available. The mixture does not contain substances classified as explosives or desensitised explosives, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Propan-2-ol CAS: 67-63-0
Explosives

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

Pure propan-2-ol is autoxidated by air and light to form an explosive cyclic triacetone triperoxide, which settles to the bottom of the vessel as a white sediment. In the event of such a finding, the container must be handled immediately and pyrotechnics called.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

The substance is classified as flammable liquid category 2 according to the value of the flash point and boiling point.

Flammable solids

It is not solid.

Self-reactive substances and mixtures

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive or self-reactive properties.

Pyrophoric liquids

Data for the substance are not available.

The substance is stable in air, there is no spontaneous ignition.

Pyrophoric solids

It is not solid.

Self-heating substances and mixtures

Data for the substance are not available.

The substance is not classified as self-heating.

Substances and mixtures, which emit flammable gases in contact with water

Data for the substance are not available.

The chemical structure of the substance does not contain metals or metalloids.

The substance is miscible with water and forms a stable mixture with it.

Oxidising liquids

Data for the substance are not available.

It is an organic substance that does not contain oxygen, fluorine or chlorine, or these elements are chemically bounded only to carbon or hydrogen.

Oxidizing solids

It is not solid.

Organic peroxides

Data for the substance are not available.
The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.
The substance is not classified as corrosive to metal.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Citric acid monohydrate ES: 201-069-1

Explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

It is not liquid.

Flammable solids

The substance is not classified as flammable solid (ECSIS Burning Test).

Self-reactive substances and mixtures

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive or self-reactive properties.

Pyrophoric liquids

It is not liquid.

Pyrophoric solids

Data for the substance are not available.
The substance is stable in air, there is no spontaneous ignition.

Self-heating substances and mixtures

Data for the substance are not available.
The substance is not classified as self-heating.

Substances and mixtures, which emit flammable gases in contact with water

Data for the substance are not available.
The chemical structure of the substance does not contain metals or metalloids.
The substance is soluble in water and forms a stable mixture with it.

Oxidising liquids

It is not liquid.

Oxidizing solids

Data for the substance are not available.
It is an organic substance that does not contain oxygen, fluorine or chlorine, or these elements are chemically bounded only to carbon or hydrogen.

Organic peroxides

Data for the substance are not available.
The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.
The substance is not classified as corrosive to metal.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Ethanediol CAS: 107-21-1

Explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Flammable gases

It is not gas.

Aerosols

It is not an aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

The substance is not classified as flammable liquid according to the value of the flash point and boiling point.

Flammable solids

It is not solid.

Self-reactive substances and mixtures

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive or self-reactive properties.

Pyrophoric liquids

Data for the substance are not available.

The substance is stable in air, there is no spontaneous ignition.

Pyrophoric solids

It is not solid.

Self-heating substances and mixtures

Data for the substance are not available.

The substance is not classified as self-heating.

Substances and mixtures, which emit flammable gases in contact with water

Data for the substance are not available.

The chemical structure of the substance does not contain metals or metalloids.

The substance is miscible with water and forms a stable mixture with it.

Oxidising liquids

Data for the substance are not available.

It is an organic substance that does not contain oxygen, fluorine or chlorine, or these elements are chemically bounded only to carbon or hydrogen.

Oxidizing solids

It is not solid.

Organic peroxides

Data for the substance are not available.

The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.

The substance is not classified as corrosive to metal.

Desensitised explosives

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

9.2.2. Other safety characteristics

Mechanical sensitivity	Not determined, it is not an explosive substance.
Self-accelerating polymerisation temperature	Not determined, it is not a polymerising substance.
Formation of explosible dust/air mixtures	Not determined, it is not a dust.
Acid/alkaline reserve	Not determined.
Evaporation rate	Not determined.
Miscibility	Not determined.
Conductivity	Not determined.
Corrosiveness	Not determined.
Gas group	Not determined, it is not gas.
Redox potential	Not determined.
Radical formation potential	Not determined.
Photocatalytic properties	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

The mixture is stable under normal conditions of use. There aren´t any hazardous reaction.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions aren´t known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

They do not form under normal use. Burning releases carbon oxides and products of incomplete combustion.

SECTION 11: Toxicological information

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

Mixture

Acute toxicity

The mixture is not classified as toxic for all routes of exposure.

Oral Data for the mixture are not available.
The mixture is not classified by the additive formula.
$ATE_{mixture}$ > 5 000 mg/kg bw.

Dermal Data for the mixture are not available.
The mixture does not contain relevant substances classified as an acute toxicity by dermal route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Inhalation Data for the mixture are not available.
The mixture does not contain relevant substances classified as an acute toxicity by inhalation route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Skin corrosion/irritation

Data for the mixture are not available.
The mixture does not contain relevant substances classified as hazardous to skin or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Serious eye damage/irritation

Data for the mixture are not available.
The mixture is classified as causes serious eye damage based on the general/specific concentration limits of substance(s).

Respiratory or skin sensitisation

Data for the mixture are not available.

The mixture does not contain substances classified as sensitizing or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Germ cell mutagenicity

Data for the mixture are not available.

The mixture does not contain substances classified as mutagenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Carcinogenicity

Data for the mixture are not available.

The mixture does not contain substances classified as carcinogenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Reproductive toxicity

Data for the mixture are not available.

The mixture does not contain substances classified as toxic for reproduction or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

STOT – single exposure

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a single exposure in category 3 according to the recommended concentration limits of substance(s).

STOT – repeated exposure

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a repeated exposure according to the general/specific concentration limits of substance(s).

Aspiration hazard

Data for the mixture are not available.

The mixture does not contain substances classified as aspiration hazard or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Other information

See section 2 and 4.

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

Acute toxicity

Oral	Based on available data, the classification criteria are not met. LD_{50} = 5 840 mg/kg bw (rat, OECD 401).
Dermal	Based on available data, the classification criteria are not met. LD_{50} = 16.4 ml/kg bw (12 792 mg/kg bw at a density of 0.78 g/cm^3, rabbit, OECD 402).
Inhalation	Based on available data, the classification criteria are not met. LC_{50} > 10 000 ppm (vapour, 6 h, OECD 403).

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Mean erythema score = 0 and oedema = 0 (rabbit, OECD 404).

Serious eye damage/irritation

The substance is classified as eye irritant.
Total mean irritation score = 1.89 (rabbit, 72 h, OECD 405).

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.
Not skin sensitising (guinea pig, OECD 406).

Germ cell mutagenicity

Based on available data, the classification criteria are not met.
Negative (OECD 471, OECD 476).

Carcinogenicity

Based on available data, the classification criteria are not met.
NOAEL = 5 000 ppm (testicular tumors, rat, male, vapour, OECD 451).

Reproductive toxicity

Based on available data, the classification criteria are not met.
NOAEL = 853 mg/kg/day (rat, oral, generation P0, OECD 415).

STOT – single exposure

The substance may cause drowsiness or dizziness.

STOT – repeated exposure

Based on available data, the classification criteria are not met.
NOEC = 500 ppm (specific toxic effect, rat, vapour, 104 weeks, OECD 451).
NOAEC = 5 000 ppm (specific exposure-related adverse reaction, rat, vapour, 104 weeks, OECD 451).
NOEC = 5 000 ppm (effects of oncogenicity, rat, vapour, 104 weeks, OECD 451).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

Citric acid monohydrate ES: 201-069-1

Acute toxicity

Oral	Based on available data, the classification criteria are not met. LD_{50} = 5 400 mg/kg bw (rat, OECD 401).
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 2 000 mg/kg bw (rabbit, OECD 402).
Inhalation	Data for the substance are not available.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.
Primary dermal irritation index PDII = 0.3 (max. 8) (rabbit, 72 h, OECD 404).

Serious eye damage/irritation

The substance is classified as eye irritant.
Overall irritation score (not fully reversible after 14 days) (rabbit, 72 h, OECD 405).

Respiratory or skin sensitisation

Data for the substance are not available.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.
In vitro:
Positive (OECD 487).
Negative (OECD 471).
In vivo:
Negative (EU Method B.22, OECD 475).

Carcinogenicity

Data for the substance are not available.

Reproductive toxicity

Data for the substance are not available.

STOT – single exposure

Data for the substance are not available.
May cause respiratory irritation.

STOT – repeated exposure

Data for the substance are not available.

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

Ethanediol CAS: 107-21-1

Acute toxicity

Oral	The substance is classified in category 4 according to harmonized classification. LD_{50} = 7 712 mg/kg bw (rat, 30% solution, BASF test). ATE = 500 mg/kg bw (for calculation by additive formula).
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 3 500 mg/kg bw (mouse, literature).
Inhalation	Based on available data, the classification criteria are not met. LC_{50} > 2.5 mg/l (aerosol, rat, 6 hrs., no death is observed, literature).

Skin corrosion/irritation

Based on available data, the classification criteria are not met.
Total irritation score = 0 (BASF test).

Serious eye damage/irritation

Based on available data, the classification criteria are not met.
Total irritation score = 0 (BASF test).

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.
Not skin sensitising (guinea pig, maximization test).

Germ cell mutagenicity

Based on available data, the classification criteria are not met.
Negative (OECD 471).

Carcinogenicity

Based on available data, the classification criteria are not met.

NOAEL = 1 000 mg/kg/day (rat, oral, literature).

Reproductive toxicity

Based on available data, the classification criteria are not met.

NOAEL > 1 000 mg/kg/day (rat, oral, generation P0, literature).

NOAEL > 1 000 mg/kg/day (rat, oral, generation F1, literature).

STOT – single exposure

Data for the substance are not available.

STOT – repeated exposure

May cause damage to kidney through prolonged or repeated oral exposure.

NOAEL = 853 mg/kg/day (kidney, rat, oral, 90 days, OECD 408).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

11.2. Information on other hazards

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet and given in the list (established in accordance with Article 59(1) for having endocrine disrupting properties of REACH regulation.

Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.There is no other relevant information on adverse health effects that is not required according to the classification criteria set out in CLP Regulation.

SECTION 12: Ecological information

12.1. Toxicity

Mixture

Data for the mixture are not available.

Acute aquatic toxicity

The mixture does not contain relevant substances classified as acute aquatic toxicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Chronic aquatic toxicity

The mixture does not contain relevant substances classified as a chronic aquatic toxicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

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

The substance is not classified as hazardous for the aquatic environment.

Fish

LC_{50}, 96 hrs., Pimephales promelas: 9 640 - 10 000 mg/l (mortality, OECD 203)

Crustaceans

EC_{50}, 24 hrs., Daphnia Magna: > 10 000 mg/l (mobility, OECD 202)
logNOEC, 16 d., Daphnia Magna: 3.37 (growth, NOEC = 2 344 µmol/l = 140.9 mg/l)

Algae

Threshold toxicity, 7 d., Scenedesmus quadricauda: 1.800 mg/l

Citric acid monohydrate ES: 201-069-1

The substance is not classified as hazardous for the aquatic environment.

Fish

LC_{50}, 48 hrs., Leuciscus idus: 440 - 760 mg/l (mortality, OECD 203)
LC_0, 48 hrs., Leuciscus idus: 200 - 620 mg/l (mortality, OECD 203)

Crustaceans

LC_{50}, 24 hrs., Daphnia Magna: 1 535 mg/l (mortality)
LC_0, 24 hrs., Daphnia Magna: 1 206 mg/l (mortality)

Algae

NOEC, 8 d., Scenedesmus quadricauda: 425 mg/l (cell density)

Ethanediol CAS: 107-21-1

The substance is not classified as hazardous for the aquatic environment.

Fish

LC_{50}, 96 hrs., Pimephales promelas: > 72 860 mg/l (mortality, literature).
NOEC, 7 d., Pimephales promelas: 32 000 mg/l (mortality, EPA 600/4-89/001).

Crustaceans

EC_{50}, 48 hrs., Daphnia Magna: > 100 mg/l (mobility, OECD 202).
NOEC, 21 d., Daphnia Magna: 2 mg/l (reproduction, literature).

Algae

IC_{50}, 96 hrs., Pseudokirchneriella subcapitata: 10 940 mg/l (number of cells, EPA/600/4-89/001).

12.2. Persistence and degradability

Mixture

Data for the mixture are not available.

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

Readily biodegradable: 53 % after 5 days (CO2 evolution, OECD 301 B).

Citric acid monohydrate ES: 201-069-1

Readily biodegradable: 100 % after 19 days (removal of dissolved organic carbon, OECD 301 E).

Ethanediol CAS: 107-21-1

Readily biodegradable: 90 - 100 % after 10 days (removal of dissolved organic carbon, OECD 301 A).

12.3. Bioaccumulative potential

Mixture

Data for the mixture are not available.

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

log Pow = 0.05 (25 °C).

Citric acid monohydrate ES: 201-069-1

Not determined.

Ethanediol CAS: 107-21-1

log Pow = -1.36 (literature).

12.4. Mobility in soil

Mixture

Data for the mixture are not available.

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

Data for the substance are not available.

Citric acid monohydrate ES: 201-069-1

Not determined.

Ethanediol CAS: 107-21-1

log Koc = 0 l/kg ((Q)SAR method).

12.5. Results of PBT and vPvB assessment

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH Regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation.

12.6. Endocrine disrupting properties

The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation. Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods of the substance or mixture and the contaminated packaging

Dispose according to the applicable European and local regulations. Do not empty unused product into drainage systems. Do not contaminate ponds or ditches with the product or used container. Do not dispose with municipal waste.

Hand over residual quantities and unregenerate solutions to the collection yard according to the worker's instructions. Empty, cleaned packaging can be stored at a landfill of the appropriate category or **in the sorted waste**.

Possible waste code

07 06 01* - aqueous washing liquids and mother liquors or 20 01 29* - detergents containing hazardous substances (mixture), 15 01 10* - packaging containing residues of or contaminated by hazardous substances (contaminated packaging), 15 01 02 - plastic packaging (clear packaging).

Physical/chemical properties that may affect waste treatment options

Not known.

Special precautions recommended for waste management

Not known.

Waste legislation

Directive 2008/98/EC on waste and repealing certain Directives, as amended.

SECTION 14: Transport information

The mixture is not classified as a flammable liquid according to the negative result of the sustained burning test according to ČSN EN ISO 9038.

14.1. UN number or ID number

Not given.

14.2. UN proper shipping name

Not given.

14.3. Transport hazard class(es)

Not given.

14.4. Packing group

Not given.

14.5. Environmental hazards

It is not dangerous for the environment during transport.

14.6. Special precautions for user

Not given.

14.7. Maritime transport in bulk according to IMO instruments

Not available.

SECTION 15: Regulatory information

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

Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended (REACH)

Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures, as amended (CLP)

Regulation No. 648/2004/EC on detergents, as amended

15.2. Chemical safety assessment

Has not been carried out for mixture.

SECTION 16: Other information

Reason for the revision of the safety data sheet

First edition.

Key or legend to abbreviations and acronyms	
Acute Tox. 4	Acute toxicity, cat. 4
Eye Dam. 1	Serious eye damage, cat. 1
Eye Irrit. 2	Eye irritation, cat. 2
Flam. Liq. 2	Flammable liquid, cat. 2
STOT RE 2	Specific target organ toxicity - repeated exposure, cat. 2
STOT SE 3	Specific target organ toxicity - single exposure, cat. 3
ATE	Acute Toxicity Estimate
bw	body weight
ADR	Accord Dangereuses Route
CLP	Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures
DNEL	Derived No Effect Level
ICAO/IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent, bioaccumulative, toxic substance
PNEC	Predicted No Effect Concentration
REACH	Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
STOT	Specific target organ toxicity
vPvB	Very persistent and very bioaccumulative substance
Sources of key data used to compile the Safety Data Sheet	
European legislation, manufacturer's safety data sheet, registration dossier of substances.	
List of H- and P- phrases	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
P280	Wear eye protection/face 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.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/container by handing it over to a collection yard or sorted waste.
Training advice	

According to SDS.

Other information

Classification according to data from the manufacturer. The mixture is classified using calculation methods according to Regulation CLP and tests. Use only for the purposes designated by the manufacturer, will prevent health and environmental risks.

The information in this safety data sheet has been prepared according to the best available knowledge. The safety data sheet has been compiled in good faith but without guarantee. Various factors may influence properties under specific conditions. It is the responsibility of the product user to assess the accuracy of the information for their specific application. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

The safety data sheet is prepared in accordance with Regulation No. 2020/878/EC. There is no additional information in accordance with the local and national legislation of the Member State in the European Union, in the safety data sheet.

The safety data sheet was prepared by LACHEPRA s.r.o.