

SAFETY DATA SHEET

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

KRYSTAL For bathrooms

Date of revision: 08. 11. 2022

Version: 5.0

Replaced version from: 29. 10. 2021

Date of issue: 19. 10. 2012

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

1.1. Product identifier

Product Name

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UFI code

UFI: DAM0-P0TQ-600H-NU90

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 acid cleaner for easy removal of limescale, rust and mechanical impurities.
Consumer 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

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Eye Irrit. 2; H319

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

The most important adverse physical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements

Hazard pictograms



Signal word

Warning.

Substances of the mixture to be placed on the label

Not are.

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P102 Keep out of reach of children.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Supplemental hazard information

Mandatory additional information is not required according to CLP regulation.
Composition according to regulation 648/2004/EC on detergents: ≥ 5 - < 15 % non-ionic surfactants, < 5 % anionic surfactants, perfumes, preservation agents (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

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| Identification of substance | | Content wt. % | Classification according to 1272/2008/EC |
|---|--------------------------------------|---------------|--|
| Citric acid monohydrate | | | |
| CAS Number | 5949-29-1 | ≤ 6.0 | Eye Irrit. 2; H319 STOT SE 3; H335 |
| EC Number | 201-069-1 | | |
| Index Number | not given | | |
| Registration Number | 01-2119457026-42-XXXX | | |
| Alcohols, C12-14, (even numbered) ethoxylated | | | |
| CAS Number | 68439-50-9 | ≤ 5.5 | Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 3; H412 |
| EC Number | not given | | |
| Index Number | not given | | |
| Registration Number | polymer, not subject to registration | | |
| The substance has specific concentration limits: | | | |
| Eye Dam. 1; H318 | C ≥ 10 % | | |
| Eye Irrit. 2; H319 | 1 % < C < 10 % | | |
| Sulfonic acids, C14-17-sec-alkane, sodium salts | | | |
| CAS Number | 97489-15-1 | < 2.5 | Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412 |
| EC Number | 307-055-2 | | |
| Index Number | not given | | |
| Registration Number | 01-2119489924-20-XXXX | | |
| The substance has specific concentration limits: | | | |
| Skin Irrit. 2; H315 | C > 10 % | | |
| Eye Dam. 1; H318 | C > 15 % | | |
| Eye Irrit. 2; H319 | 10 % < C ≤ 15 % | | |
| 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. If pain or redness persists, seek medical advice. | | | |
| Ingestion | | | |

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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 CO₂, 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, sulphur oxides, hydrogen sulphide 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

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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. Protect from frost.

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

7.3. Specific end use(s)

Instructions for use: Apply directly to soiled surfaces, leave on for a few minutes, then clean with a sponge or rinse with running water.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure limit value

Not determined in EU.

8.1.2. Biological limit values

Not determined in EU.

8.1.3. DNEL and PNEC values

Citric acid monohydrate ES: 201-069-1

DNEL - not yet available

PNEC

| Fresh water | Marine water | Intermittent releases | | Sewage Treatment Plant (STP) |
|-------------|--------------|-----------------------|--------------|------------------------------|
| | | Fresh water | Marine water | |
| 0.44 mg/l | 0.044 mg/l | not given | not given | 1 000 mg/l |

PNEC

| Sediment (freshwater) | Sediment (marine water) | Air | Soil | Hazard for predators |
|-----------------------|-------------------------|-----------|------------|----------------------|
| 34.6 mg/l | 3.46 mg/kg | not given | 33.1 mg/kg | not given |

Sulfonic acids, C14-17-sec-alkane, sodium salts CAS: 97489-15-1

DNEL

| Area of use | Route of exposure | Effect | Exposure time | Value |
|-------------|-------------------|-----------------|---------------|------------------------|
| Workers | Inhalation | Systemic effect | Long term | 35 mg/m ³ |
| Workers | Dermal | Systemic effect | Long term | 5 mg/kg/day |
| Workers | Dermal | Local effect | Long term | 2.8 mg/cm ² |

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|--|-------------------------|-----------------------|------------------|------------------------------|
| Workers | Dermal | Local effect | Acute/short term | 2.8 mg/cm ² |
| General population | Inhalation | Systemic effect | Long term | 12.4 mg/m ³ |
| General population | Dermal | Systemic effect | Long term | 3.57 mg/kg/day |
| General population | Dermal | Local effect | Long term | 2.8 mg/cm ² |
| General population | Dermal | Local effect | Acute/short term | 2.8 mg/cm ² |
| General population | Oral | Systemic effect | Long term | 7.1 mg/kg/day |
| PNEC | | | | |
| Fresh water | Marine water | Intermittent releases | | Sewage Treatment Plant (STP) |
| | | Fresh water | Marine water | |
| 0.06 mg/l | 0.006 mg/l | 0.06 mg/l | not given | 600 mg/l |
| PNEC | | | | |
| Sediment (freshwater) | Sediment (marine water) | Air | Soil | Hazard for predators |
| 9.4 mg/kg | 0.94 mg/kg | no effect | 9.4 mg/kg | 53.3 mg/kg food |
| 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 goggles or face shield when manufacturing and handling the product. In normal use it is not necessary. Use glasses in case of eye contact. | | | | |
| Skin protection - hand protection | | | | |
| Wear protective gloves when manufacturing and handling the product. In normal use it is not necessary to use protective gloves. Wear protective gloves in case of prolonged skin contact. | | | | |
| 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 | | | | |
| In normal use is not necessary, in case of prolonged contact with the product, wear protective work clothes and shoes. | | | | |
| Respiratory protection | | | | |
| Not necessary in case of compliance concentration limits (if they were exceeded, use a respirator against vapour). 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. | | | | |

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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 | Yellow. |
| Odour | Characteristic. |
| Melting point/freezing point | Not determined. |
| Boiling point or initial boiling point and boiling range | 100 °C |
| Flammability | Not determined. |
| Lower explosion limit | Not determined. |
| Upper explosion limit | Not determined. |
| Flash point | > 100 °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 | 2.1. |
| 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 | 23 hPa. |
| Density and/or relative density | $D_4^{20} = 1.043$. |
| 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. |

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| | |
|--|---|
| 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. |
| Alcohols, C12-14, (even numbered) ethoxylated CAS: 68439-50-9 | |
| Physical state | Liquid. |
| Colour | Colourless to yellowish. |
| Odour | Alcoholic. |
| Melting point/freezing point | 16 °C. |
| Boiling point or initial boiling point and boiling range | > 250 °C. |
| 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 | 125 °C. |
| Auto-ignition temperature | Not determined. |
| Decomposition temperature | Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose. |
| pH | 5.0 - 7.0 (1% solution, 20 °C). |
| Kinematic viscosity | Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon. |
| Solubility | Not determined. |
| Partition coefficient n-octanol/water (log value) | Not determined. |
| Vapour pressure | Not determined. |
| Density and/or relative density | 0.98 g/cm ³ (20 °C). |

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| | |
|---|---|
| Relative vapour density | Not determined. |
| Particle characteristics | Does not apply to liquid. |
| Sulfonic acids, C14-17-sec-alkane, sodium salts CAS: 97489-15-1 | |
| Physical state | Solid. |
| Colour | Light yellow. |
| Odour | Characteristic. |
| Melting point/freezing point | > 350 °C (OECD 113). Not determined, substance decomposes. |
| Boiling point or initial boiling point and boiling range | Not determined, substance decomposes. |
| Flammability | Non-flammable solid (EU method A.10). |
| 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 | > 350 °C (OECD 113). |
| pH | Not determined. |
| Kinematic viscosity | Does not apply to solid. |
| Solubility | ca. 32 wt. % (25 °C, pH = 7.0 - 8.5, literature). |
| Partition coefficient n-octanol/water (log value) | log Pow = 0.2 (20 °C, pH = 7.0 - 8.5, EU method A.8). |
| Vapour pressure | Not determined. |
| Density and/or relative density | 0.62 g/cm ³ (20 °C, EN ISO 60). |
| Relative vapour density | Does not apply to solid. |
| Particle characteristics | D50 = 5 mm (literature). |
| 9.2. Other information | |
| 9.2.1. Information with regard to physical hazard classes | |
| Mixture | |
| The mixture does not contain substances classified as hazardous to the physical classes, or the concentration of substance(s) is lower than the limit for inclusion in Section 3. | |
| 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. | |

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| <i>Oxidising gases</i> |
| It is not gas. |
| <i>Gases under pressure</i> |
| It is not gas. |
| <i>Flammable liquids</i> |
| It is not liquid. |
| <i>Flammable solids</i> |
| The substance is not classified as flammable solid (ECSIS Burning Test). |
| <i>Self-reactive substances and mixtures</i> |
| Data for the substance are not available. The substance does not contain chemical groups associated with explosive or self-reactive properties. |
| <i>Pyrophoric liquids</i> |
| It is not liquid. |
| <i>Pyrophoric solids</i> |
| Data for the substance are not available. The substance is stable in air, there is no spontaneous ignition. |
| <i>Self-heating substances and mixtures</i> |
| Data for the substance are not available. The substance is not classified as self-heating. |
| <i>Substances and mixtures, which emit flammable gases in contact with water</i> |
| 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. |
| <i>Oxidising liquids</i> |
| It is not liquid. |
| <i>Oxidizing solids</i> |
| 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. |
| <i>Organic peroxides</i> |
| Data for the substance are not available. The substance does not contain a bivalent group -O-O- with at least one organic radical. |
| <i>Corrosive to metals</i> |
| Data for the substance are not available. The substance is not classified as corrosive to metal. |
| <i>Desensitised explosives</i> |
| Data for the substance are not available. The substance does not contain chemical groups associated with explosive properties. |
| Sulfonic acids, C14-17-sec-alkane, sodium salts |
| CAS: 97489-15-1 |

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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 (EU method A.10).

Self-reactive substances and mixtures

Data for the substance are not available.

The substance is not classified as self-reactive.

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 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 does not contain chemical groups associated with oxidising properties.

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

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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

Protect from frost.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

They do not form under normal use. Burning releases carbon oxides, sulphur oxides, hydrogen sulphide 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

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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.
 $ATE_{\text{mixture}} > 6\,250 \text{ mg/kg}$.

Dermal Data for the mixture are not available.
The mixture does not contain 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 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 is not classified as skin irritant based on the general/specific concentration limits of substance(s).

Serious eye damage/irritation

Data for the mixture are not available.
The mixture is classified as eye irritant 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 does not contain substances classified as toxic for specific target organs in a repeated exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

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| | |
|---|---|
| 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. | |
| 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 (rat, OECD 401). |
| Dermal | Based on available data, the classification criteria are not met. LD ₅₀ > 2 000 mg/kg (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. <u>In vitro:</u> Positive (OECD 487). Negative (OECD 471). <u>In vivo:</u> 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 | |

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The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm²/s or less at 40 °C.

Alcohols, C12-14, (even numbered) ethoxylated

CAS: 68439-50-9

Acute toxicity

- Oral** The substance is classified in category 4.
LD₅₀ = 300 - 2 000 mg/kg (rat).
ATE = 500 mg/kg (for calculation by additive formula).
- Dermal** Based on available data, the classification criteria are not met.
LD₅₀ > 2 000 mg/kg (rabbit).
- Inhalation** Data for the substance are not available.

Skin corrosion/irritation

Data for the substance are not available.

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes.

Respiratory or skin sensitisation

Data for the substance are not available.

Germ cell mutagenicity

Data for the substance are not available.

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.

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 mm²/s or less at 40 °C.

Sulfonic acids, C14-17-sec-alkane, sodium salts

CAS: 97489-15-1

Acute toxicity

- Oral** The substance is classified in category 4.
LD₅₀ = 500 - 2 000 mg/kg (rat, OECD 401).
ATE = 500 mg/kg (for calculation by additive formula).
- Dermal** Based on available data, the classification criteria are not met.
LD₅₀ > 2 000 mg/kg (mouse, female).
- Inhalation** Data for the substance are not available.

Skin corrosion/irritation

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The substance is classified as skin irritant.

Mean erythema score = 3.45 (fully reversible after 14 days) and oedema = 2.44 (fully reversible after 14 days) (rabbit, 72 hrs. OECD 404).

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes.

Mean score of corneal opacity $> 1 - \leq 3$ (not fully reversible), iritis $> 0 - \leq 1$ (not fully reversible), conjunctival redness $> 2 - \leq 3$ (not fully reversible), conjunctival oedema ≥ 2 (not fully reversible) (rabbit, 72 h, OECD 405).

Respiratory or skin sensitisation

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

Not skin sensitising (guinea pig, maximization test).

Not skin sensitising (guinea pig, OECD 406).

The substance is classified as skin sensitising in category 1B (mouse, OECD 429).

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.

NOEL = ca. 1 000 mg/kg/day (carcinogenicity, rat, oral).

LOAEL = ca. 1 000 mg/kg/day (toxicity, rat, oral).

Reproductive toxicity

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

NOAEL $\geq 1\ 000$ mg/kg/day (rat, oral, generation P, F1a, F1b, F2a, F2b, two-generation test).

STOT – single exposure

Data for the substance are not available.

STOT – repeated exposure

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

NOAEL = ca. 500 mg/kg/day (mouse, dermal).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of $20.5\text{ mm}^2/\text{s}$ or less at $40\text{ }^\circ\text{C}$.

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

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12.1. Toxicity

Mixture

Data for the mixture are not available.

Acute aquatic toxicity

The mixture does not contain 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 is not classified as chronic aquatic toxicity based on calculation according to the summation method.

| | | | | |
|----------|---|---|-----|-----|
| category | 1 | 2 | 3 | 4 |
| Σ | 0 | 0 | < 8 | < 8 |

Citric acid monohydrate

ES: 201-069-1

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

Fish

LC₅₀, 48 hrs., Leuciscus idus: 440 - 760 mg/l (mortality, OECD 203)

LC₀, 48 hrs., Leuciscus idus: 200 - 620 mg/l (mortality, OECD 203)

Crustaceans

LC₅₀, 24 hrs., Daphnia Magna: 1 535 mg/l (mortality)

LC₀, 24 hrs., Daphnia Magna: 1 206 mg/l (mortality)

Algae

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

Alcohols, C12-14, (even numbered) ethoxylated

CAS: 68439-50-9

The substance is classified as Aquatic Chronic 3; H412.

Fish

Data for the substance are not available.

Crustaceans

EC₅₀, 48 hrs., Daphnia Magna: > 1 mg/l.

Algae

EC₅₀, 72 hrs., Desmodesmus subspicatus: > 1 mg/l.

Sulfonic acids, C14-17-sec-alkane, sodium salts

CAS: 97489-15-1

The substance is classified as Aquatic Chronic 3; H412.

Fish

LC₅₀, 96 hrs., Leuciscus idus: 5.5 mg/l (mortality, EU method C.1).

NOEC, 28 d., Oncorhynchus mykiss: 0.85 mg/l (mortality, OECD 204).

Crustaceans

EC₅₀, 48 hrs., Daphnia Magna: 9.2 mg/l (mobility, OECD 202).

NOEC, 22 d., Daphnia Magna: 0.36 mg/l (reproduction, OECD 202).

Algae

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EC₅₀, 72 hrs., *Desmodemus subspicatus*: > 61 mg/l (growth rate, OECD 201).

EC₁₀, 72 hrs., *Desmodemus subspicatus*: 58.8 mg/l (growth rate, OECD 201).

12.2. Persistence and degradability

Mixture

Data for the mixture are not available.

Citric acid monohydrate

ES: 201-069-1

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

Alcohols, C12-14, (even numbered) ethoxylated

CAS: 68439-50-9

Readily biodegradable: > 60 % (OECD 301 B).

Sulfonic acids, C14-17-sec-alkane, sodium salts

CAS: 97489-15-1

Readily biodegradable: 78 % after 28 days (CO₂ evolution, OECD 301 B).

12.3. Bioaccumulative potential

Mixture

Data for the mixture are not available.

Citric acid monohydrate

ES: 201-069-1

Not determined.

Sulfonic acids, C14-17-sec-alkane, sodium salts

CAS: 97489-15-1

log Pow = 0.2 (20 °C, pH = 7 - 8.5, EU method A.8).

12.4. Mobility in soil

Mixture

Data for the mixture are not available.

Citric acid monohydrate

ES: 201-069-1

Not determined.

Sulfonic acids, C14-17-sec-alkane, sodium salts

CAS: 97489-15-1

Data for the substance are not available.

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.

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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 (eg. in a hazardous waste incinerator). **Do not empty unused product into drainage systems.** Do not contaminate ponds or ditches with the product or used container. Hand over the residual amounts and solutions to a licensed disposal company.

Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Possible waste code

16 03 05* - organic wastes containing hazardous substances 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

This product is not classified as a dangerous for transportation (ADR/RID, IMDG, ICAO/IATA).

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

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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

Change of the labeling of the mixture. Change in the composition of the mixture in section 3 and related changes in the other sections. Change in the classification of citric acid.

Key or legend to abbreviations and acronyms

| | |
|-------------------|--|
| Acute Tox. 4 | Acute toxicity, cat. 4 |
| Aquatic Chronic 3 | Chronic aquatic hazard, cat. 3 |
| Eye Dam. 1 | Eye Dam. 1 |
| Eye Irrit. 2 | Eye Irrit. 2 |
| Skin Irrit. 2 | Skin irritation, cat. 2 |
| STOT SE 3 | Specific target organ toxicity - single exposure, cat. 3 |
| 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

| | |
|------|--------------------------------|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |

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| | |
|----------------|---|
| H335 | May cause respiratory irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |
| P102 | Keep out of reach of children. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P501 | Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |

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 SDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. 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 created 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 created by company LACHEPRA s.r.o.