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

1.1 Product identifier:

Trade name: AS-CALC
Product code: No information available.
UFI: F6D1-60PE-800P-K5JN

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

Identified uses: Concentrated agent for cleaning objects with deposits of calcium carbonate (limescale) with ultrasonic cleaning - washing in ultrasonic baths and bathrooms.
Uses advised against: Do not use for purposes other than those recommended.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:
ASONIC d.o.o.
Tržaška cesta 134
1000 Ljubljana, Slovenia
Phone: + 386 41 566618
e-mail: order@asonic.si

1.4 Emergency telephone number:

Belgium: 070 245 245
Bulgaria: +359 2 9154 233
Croatia: +3851 2348 342 (24/7 in Croatian and English).
Czech Republic: +420 224 919 293, +420 224 915 402
Denmark: +45 8212 1212
Estonia: 112 (National emergency telephone number (Häirekeskuse number)); 16662 (nationally) and +372) 7943 794 (calling from abroad)
Finland: 0800 147 111, 09 471 977 (Open 24 hours a day)
France: + 33 (0)1 45 42 59 59
Greece: (0030) 2107793777
Hungary: +36-80-201-199 (0-24h, free of charge)
Ireland: 01 809 2566
Italy (CAP, Phone Number, City): 00165 06 68593726 (Roma); 71122 800183459 (Foggia); 80131 081-5453333 (Napoli); 161 06-49978000 (Roma); 168 06-3054343 (Roma); 50134 055-7947819 (Firenze); 27100 0382-24444 (Pavia); 20162 02-66101029 (Milano); 24127 800883300 (Bergamo); 37126 800011858 (Verona).
Latvia: Valsts ugunsdzēsības un glābšanas dienests, phone number: 112. Toksikoloģijas un sepses klīnikas Saindēšanās un zāļu informācijas centrs, Hipokrāta 2, Rīga, Latvija, LV-1038, phone number +371 67042473. Service is available 24 hours.
Lithuania: +370 (85) 2362052
Luxembourg: (+352) 8002 5500 (24/7, experts answer in French, Dutch and English)
The Netherlands: +31 (0)88 755 8000
Norway: 22 59 13 00 (Open 24 hours a day, 7 days a week.)
Portugal: +351 800 250 250
Romania: +40213183606
Slovakia: +421 2 5477 4166
Slovenia: 112
Spain: + 34 91 562 04 20 (available 24h/365 days)
Sweden: 112

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

Eye Dam. 1, H318 (Serious eye damage/Eye irritation, Category 1, H318)
STOT SE 3, H335 (Specific Target Organ Toxicity - Single exposure: Respiratory tract irritation, Category 3, H335)

2.2 Label elements:

2.2.1 Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word(s): Danger

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Hazard pictogram(s):

Hazard statement(s):
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statement(s):
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304 + P340: IF INHALED Remove person to fresh air and keep comfortable for breathing.
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/...
P312 Call a POISON CENTER/doctor/... if you feel unwell.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to according to regulations.

Contains:
Citric acid; 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts; Oxirane, 2-methyl-, polymer with oxirane, mono(2-propylheptyl) ether

2.3 Other hazards:
The mixture does not meet the criteria for classification as PBT and vPvB.

SECTION 3: Composition/information on ingredients

3.1 Mixture

Description of the substance/mixture: No information available.

Substance	EC No.	CAS No.	Index No.	CLP-classification	Concentration % (w/w)	REACH Reg. No.
Citric acid	/	77-92-9	607-750-00-3	Eye Irrit. 2, H319 STOT SE 3, H335	15 - 35	/
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	263-058-8	61789-40-0	/	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400	1-5	/
Oxirane, 2-methyl-, polymer with oxirane, mono(2-propylheptyl) ether	605-450-7	166736-08-9	/	Acute Tox. 4, H302 Eye Dam. 1, H318	2 - 12	/

More information: Please see section 16 for the full text of H- / EUH-phrases.

SECTION 4: First aid measures

4.1 Description of first aid measures

General: Remove contaminated clothing.
Inhalation: Provide fresh air. If in doubt or if symptoms persist, seek medical advice.

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Skin contact**:**	Wash skin with water/shower. If in doubt or if symptoms persist, seek medical advice.
Eye contact:	Rinse thoroughly with clean, running water for at least 10 minutes, keeping the eyelids open. In case of eye irritation, seek medical attention.
Ingestion:	Rinse mouth. If you feel unwell, call the doctor.
Protection of the first aider:	No information available.

4.2 Most important symptoms and effects, both acute and delayed
Irritation, cough, difficult breathing.

4.3 Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:	Adjust the fire extinguishing measures to the environmental conditions. Sprayed water jet, alcohol-resistant foam, dry extinguishing powder, BC powder, carbon dioxide (CO_2).
Unsuitable extinguishing media:	Full water jet.
5.2 Special hazards arising from the substance or mixture	The components of the mixture burn. The product itself does not burn. Hazardous combustion products: Carbon monoxide (CO), Carbon dioxide (CO_2).
5.3 Advice for firefighters	In case of fire and/or explosion, do not breathe smoke. Extinguish the fire from a safe distance and using normal precautions. Wear a self-contained breathing apparatus.
Additional information:	No information available.

SECTION 6: Accidental release measures

6.1 Personal safety measures, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:	Avoid contact with skin, eyes and clothes. Do not inhale vapour/aerosol.
6.1.2 For emergency responders:	No information available.
6.2 Environmental precautions	Keep away from drainage pipes, surface and underground water. The product is an acid. As a rule, neutralization is required before discharging wastewater into a treatment plant.

6.3 Methods and materials for containment and cleaning up

6.3.1 Spill Containment:	Covering drainage pipes.
6.3.2 Spill clean-up:	Collect with liquid binding material (sand, diatomaceous earth, acid binder, universal binder). Transfer to appropriate containers for disposal.
6.3.3 Other information:	No information available.
6.4 References to other sections	Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. For disposal see section 13.
Additional information:	No information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations for preventing fire, the formation of aerosols and dust, and for protecting the environment:	Ensuring adequate ventilation.

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Advice on general occupational hygiene:	Wash your hands before breaks and at the end of work. Keep away from food, drink and animal feed.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:	Keep the packaging tightly closed.
Packaging materials:	No information available.
Requirements for storage areas and containers:	Follow the instructions for combined storage. Recommended storage temperature: 15 – 25 °C
Storage class:	No information available.
7.3 Specific end use(s)	No information available.
Recommendations:	No information available.
Specific uses for industry:	No information available.
Additional information:	No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 Occupational exposure limit:

Substance	CAS No.	Country	Limit values 8h		Limit value - Short term		Remarks
			mg/m3	ppm	mg/m3	ppm	
Citric acid	77-92-9	Germany (AGS)	/	2 (1)	/	4 (1)(2)	(1) Inhalable fraction (2) 15 minutes average value
Citric acid	77-92-9	Germany (DFG)	/	2 (1)	/	4 (1)(2)	(1) Inhalable fraction and vapour (2) 15 minutes average value
Citric acid	77-92-9	Switzerland	/	2 (1)	/	4 (1)(2)	(1) Inhalable fraction (2) 15 minutes average value

8.1.2 Biological limit values:

Substance	CAS No.	Parameter	Biological limits values (BAT)	Biological sample	Sampling time
/	/	/	/	/	/

8.1.3 DNEL:
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts 61789-40-0
DNEL 8,22 [mg/m³] inhalation systemic

8.1.4 PNEC:
Citric acid 77-92-9 PNEC 0.44 mg/l aquatic organisms freshwater short-term (single exposure)
Citric acid 77-92-9 PNEC 0.044 mg/l aquatic organisms sea water short-term (single exposure)
Citric acid 77-92-9 PNEC 1,000 mg/l aquatic organisms wastewater treatment plants (WTP) short-term (single exposure)
Citric acid 77-92-9 PNEC 34.6 mg/kg freshwater aquatic organisms sediment short-term (single exposure)
Citric acid 77-92-9 PNEC 3.46 mg/kg aquatic organisms marine sediment short-term (single exposure)
Citric acid 77-92-9 PNEC 33.1 mg/kg terrestrial organisms, soil organisms short-term (single exposure)

8.2 Exposure controls

8.2.1 Appropriate engineering controls:	No information available.
8.2.2 Individual protection measures, such as personal protective equipment:	
• General	No information available.

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• Eye/face protection	Use safety glasses with side shields.
• Skin protection	No information available.
• Hand protection	Wear protective gloves. Chemical protection gloves tested in accordance with EN 374 are suitable. In case of special use, it is recommended to check the chemical resistance of the mentioned protective gloves with the supplier of the gloves. The times are approximate values measured at 22 °C and with continuous contact. Increased temperatures due to heating of substances, body heat, etc. reduce the efficiency of the layer thickness due to expansion can lead to a significant reduction in breakthrough time. If in doubt, contact the manufacturer. At approximately 1.5 times larger/smaller layer thickness, it is suitable the penetration time is doubled/halved. The data refer only to the pure substance. When the substances are transferred to the mixture, the data can only be considered as a recommendation.
• Respiratory protection	Respiratory protection is required when: Formation of aerosols or mists. Type: ABEK (combined gas and vapor filter, color code: brown/grey/yellow/green).
• Thermal hazards	No information available.
8.2.3 Environmental exposure controls:	Keep away from drainage pipes, surface and underground water.
Additional information:	No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	**Value/Unit/Method**
Physical state	Liquid
Colour	Light yellow
Odour	None
Odor threshold limit value	No information available.
Melting point/freezing point	No information available.
Boiling point or initial boiling point and boiling range	~100 °C at 1,013 hPa
Flammability	No information available.
Lower/upper explosive limit	No information available.
Flash point	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
pH	<7 (20 °C)
Kinematic viscosity	No information available.
Solubility	In water: can be mixed in any ratio/completely miscible with water.
Partition coefficient n-octanol/water (log value)	No information available.
Vapor pressure	No information available.
Density and/or relative density	1.10 g/cm³ at 20 °C
Relative density	No information available.
Relative vapor density	No information available.
Particle characteristics	No information available.
Oxidising properties	The product is not oxidizing
9.2 Other information:	
9.2.1 Information with regard to physical hazard classes	No information available.
9.2.2 Other safety characteristics	No information available.
Additional information:	No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity The product is not reactive under normal conditions.

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10.2 Chemical stability	The material is stable under the environmental and intended conditions (temperature and pressure) of storage and handling.
10.3 Possibility of hazardous reactions	Violent reactions with: strong oxidants, reducing agents, metals, bases.
10.4 Conditions to avoid	There are no known specific conditions that should be avoided.
10.5 Incompatible Materials	Various metals.
10.6 Hazardous decomposition products	Hazardous combustion products: see section 5.
Additional information:	No information available.

SECTION 11: Toxicological information

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

Acute toxicity:	The mixture is not classified. Ingredients that may contribute to acute oral toxicity: Oxirane, 2-methyl-, polymer with oxirane, mono(2-propylheptyl) ether, LD 50 (oral): ATE 500 mg/kg Calculated estimated value for acute oral toxicity ATE (mixture): 4166 mg/kg The mixture is not classified according to acute toxicity (oral). Ingredients that may contribute to acute dermal toxicity: There are no suitable ingredients in the mixture. The mixture is not classified according to acute toxicity (dermal). Ingredients that may contribute to acute inhalation toxicity: There are no suitable ingredients in the mixture. The mixture is not classified for acute toxicity (inhalation).
Skin corrosion/irritation:	The mixture is not classified.
Serious eye damage/irritation:	Result: the mixture is classified as category 1.
Respiratory or skin sensitisation:	The mixture is not classified.
Germ cell mutagenicity:	The mixture is not classified.
Carcinogenicity:	The mixture is not classified.
Reproductive toxicity:	The mixture is not classified.
STOT – single exposure:	Important substances: citric acid, Substance classification: Category 3 Result: the mixture is classified in category 3 (Respiratory tract irritation).
STOT - repeated exposure:	Important substances: citric acid, Substance classification: Category 3 General limit values (GCL) must be observed: Category 3: 20% Result: the mixture is classified in category 3 (Respiratory tract irritation).
Aspiration hazard:	The mixture is not classified.
Information on likely routes of exposure:	The mixture is not classified.
Symptoms related to the physical, Chemical and toxicological characteristics:	If in eyes: Causes severe eye irritation Inhalation: Irritation of the respiratory tract, cough, difficulty breathing
Delayed and immediate effects as Well as chronic effects from short and long-term exposure:	No information available.
Interactive effects	No information available.

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Absence of specific data:	No information available.
Mixture versus substance information:	No information available.

11.2 Information on other hazards

Endocrine disruptor properties:	No information available.
Other information:	No information available.

SECTION 12: Ecological information

12.1 Toxicity

Not classified as hazardous to the aquatic environment.
Toxicity of the components of the mixture to aquatic organisms (acute).

Citric acid CAS-77-92-9, LC50- 440 mg/l, fish -48 h
Biodegradation - no data available.

Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether CAS 166736-08-9
Harmful to aquatic organisms
Toxicity to fish:
LC50 (96 h) > 10 - 100 mg/l, Brachydanio rerio (OECD Directive 203)
Aquatic invertebrates:
EC50 (48 h) > 10 - 100 mg/l, Daphnia magna
Aquatic plants:
EC50 (72 h) > 10 - 100 mg/l, Scenedesmus subspicatus
Microorganisms / effect on activated sludge:
EC50 (0.5 h), bacteria, not determined
Chronic toxicity to fish: No data available.
Chronic toxicity to aquatic invertebrates: No data available.
Assessment of soil toxicity: No data of soil toxicity.

12.2 Persistence and degradability

Citric acid CAS-77-92-9 biotic/abiotic, 98% 2 days

Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether CAS 166736-08-9
Excretion data: >= 90% bismuth - active substance (mod. OECD 303A)
Analogy: Evaluation based on chemically similar products.
> 60% of the formation of the theoretical CO2 value (28 d) (OECD 301B; ISO 9439; 92/69/EWG, C.4-C)
Readily biodegradable.

12.3 Bioaccumulative potential

No information available.
Bioaccumulative potential of the components of the mixture

Citric acid CAS-77-92-9
log KOW, -1.64

Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether CAS 166736-08-9
Assessment of potential bioaccumulation: No increase in concentration in organisms is expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Does not meet the criteria for identification as PBT and vPvB.

12.6 Endocrine disrupting properties

No information available.

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12.7 Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment of mixture:	The chemical and its packaging must be disposed of as hazardous waste. Dispose of contents/packaging in accordance with local/regional/national/international regulations. Discharge of waste water to sewers - relevant information: Do not discharge into sewers. Relevant legal provisions on waste (Basel Convention) Properties of waste that make them dangerous: H11 Toxic (subsequent or chronic) Remarks Waste is classified into categories that can be handled separately by local or state waste management facilities. Follow all applicable state and regional regulations.
EWC code:	No information available.
Waste treatment of packaging:	No information available.
EWC code:	15 01 10* Packaging containing residues of dangerous substances or contaminated with dangerous substances

Additional information: No information available.

SECTION 14: Transport information

14.1 UN number and ID number: 1760

14.2 UN proper shipping name: ADR/RID - CORROSIVE LIQUID IMDG - CORROSIVE LIQUID
14.3 Transport hazard class(es):
ADR/RID 8
IMDG 8
IATA 8
14.4 Packing group:
ADR/RID III
IMDG III
IATA III
14.5 Environmental hazards: According to traffic regulations, it is not classified as dangerous.
14.6 Special precautions for user: No
14.7 Maritime transport in bulk according to IMO instruments: Not transported in bulk.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on registration, evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency and amending the Directive 1999/45 / EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 and Council Directives 76/769 / EEC and Commission Directives 91/155 / EEC, 93/67 / EEC, 93/105 / EC and 2000/21 / EC (as amended by Commission Regulation (EU) No. 830/2015) - with amendments
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC

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and amending Regulation (EC) No 1234/2007.

15.2 Chemical safety assessment
No information available.

SECTION 16: Other information

Changes to the safety data sheet: No information available.

Abbreviations:
CLP - Classification, Labelling and Packaging
DNEL – Derived No-Effect Level
EWC code - six-digit code used to identify waste as listed in the European Waste Catalogue
PNEC - Predicted concentration without effect
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals
STOT – Specific Target Organ Toxicity
UFI - the 16-character unique formula identifier (UFI) code

Resources for creating a safety data sheet: AS-CALC - SI (Revision date: 10.10.2023)

List of relevant hazard statements and/or precautionary statements under sections 2 to 15:
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.

Training for workers: No information available.

Recommended usage restrictions: No information available.

The information in the safety data sheet is based on our knowledge and available information. The safety data sheet indicates the product and the safety measures prescribed for it. The safety data sheet does not guarantee the quality of the product. A legal or natural person who places a chemical on the market is not responsible for any improper use, only this and the resulting consequences.

- End of safety data sheet -