

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 7/11/2017 Revision date: 3/7/2024 Supersedes version of: 7/18/2023 Version: 4.0

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

1.1. Product identifier

Product form	: Substance
Trade name	: CITRIC ACID LAFFORT
Chemical name	: Citric acid monohydrate
EC-No.	: 201-069-1
CAS-No.	: 5949-29-1
REACH registration No.	: 01-2119457026-42
C&L notification reference no	: 02-2119773813-30-0000
Type of product	: Acids
Formula	: C6H10O8
Product group	: Trade product

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

1.2.1. Relevant identified uses

Main use category Industrial/Professional use spec Use of the substance/mixture Use of the substance/mixture

- : Professional use
- : For professional users only

Distributor

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- : Iron-complexing agent to be used against iron casse. Used in the acid balancing of wine.
- : For œnological use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

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1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Bulgaria	Национален токсикологичен информационен център Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов"	бул. Ген. Едуард И. Тотлебен 21 1606 София	+359 2 9154 233	
Croatia	Centar za kontrolu otrovanja Institut za medicinska istraživanja i medicinu rada	Ksaverska Cesta 2 p.p. 291 10000 Zagreb	+385 1 234 8342	Information available 24/7 in Croatian and English
Czech Republic	Toxikologické informační středisko Klinika pracovního lékařství VFN a 1. LF UK	Na Bojišti 1 120 00 Praha 2	+420 224 919 293 +420 224 915 402	
Denmark	Giftlinjen	Bispebjerg Bakke 23 Opgang 20 C 2400 København NV	+45 82 12 12 12	
Greece	Poisons Information Centre Children's Hospital P&A Kyriakou	11762 Athens	+30 2 10 779 3777	
Hungary	Országos Kémiai Biztonsági Intézet Egészségügyi Toxikológiai Tájékoztató Szolgálat	Nagyvárad tér 2. 1437 Budapest, Pf. 839 1097 Budapest	+36 80 20 11 99	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
Poland	National Poisons Information Centre The Nofer Institute of Occupational Medicine (Łódź)	ul. Teresy 8 P.O. BOX 199 90950 Łódź	+48 42 63 14 724	
Romania	Department of Clinical Toxicology Spitalul de Urgenta Floreasca	Calea Floreasca Bucuresti	+40 21 230 8000	
Serbia	Nacionalni centar za kontrolu trovanja - VMA	Crnotravska 17 11000 Beograd	+381 11 360 84 40	
Slovenia	Center za klinično toksikologijo in farmakologijo Interna klinika, UKCL	Zaloška 7 1000 Ljubljana	+386 522 52 83	
Sweden	Giftinformationscentralen	Solna Strandväg 21 171 54 Solna	112 – begär Giftinformation	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals

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Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract	H335
irritation	
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [Cl	.P]
Hazard pictograms (CLP)	: GHS07
Signal word (CLP)	: Warning
Hazard statements (CLP)	: H319 - Causes serious eye irritation.
	H335 - May cause respiratory irritation.
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264 - Wash hands thoroughly after handling.
	P280 - Wear protective gloves, protective clothing, 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.
	P312 - Call a POISON CENTRE or doctor if you feel unwell.
	P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Contains no PBT and/or vPvB substances \geq 0.1% assessed in accordance with REACH Annex XIII

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SECTION 3: Composition/information on ingredients		
3.1. Substances		
Substance type Name CAS-No. EC-No.	 Mono-constituent Citric_Acid_Laffort 5949-29-1 201-069-1 	
Name	Product identifier	%
Citric acid monohydrate - E330	CAS-No.: 5949-29-1 EC-No.: 201-069-1 EC Index-No.: 607-750-00-3 REACH-no: 01-2119457026-42	2

3.2. Mixtures

Not applicable

SECTION 4: First aid measures		
4.1. Description of first aid measures		
First-aid measures general	: If symptoms persist call a doctor.	
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.	
First-aid measures after skin contact	: After contact with skin, wash immediately and thoroughly with water and soap. If symptoms persist, call a physician. Wash skin with plenty of water.	
First-aid measures after eye contact	 In case of eye contact, immediately rinse with clean water for 10-15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Rinse cautiously with water for several minutes. 	
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to an unconscious person. Call a poison center or a doctor if you feel unwell.	
4.2. Most important symptoms and effects, both acute and delayed		
Symptoms/effects	: More detailed information: See section 11.	
Symptoms/effects after inhalation	: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.	
Symptoms/effects after skin contact	: None under normal conditions.	
Symptoms/effects after eye contact	: Eye irritation. Serious damage to eyes.	
Symptoms/effects after ingestion	: Gastrointestinal complaints.	

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

Treat symptomatically.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: If there is a fire close by, use suitable extinguishing agents. carbon dioxide (CO2), powder, alcohol- resistant foam, water spray. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use water jet.
5.2. Special hazards arising from the substance or mixture	
Fire hazard Reactivity in case of fire	: In case of fire and/or explosion do not breathe fumes.: Not classified as flammable by EC criteria.

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Hazardous decomposition products in case of fire	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Do not contaminate ground and surface water. Dispose in a safe manner in accordance with local/national regulations.

SECTION 6: Accidental release mea	sures	
6.1. Personal precautions, protective equipment and emergency procedures		
General measures	: Do not handle until all safety precautions have been read and understood. Evacuate personnel to a safe area.	
6.1.1. For non-emergency personnel		
Protective equipment	: Wear personal protective equipment.	
Emergency procedures	: Ventilate spillage area. Do not touch or walk on the spilled product. Avoid contact with skin and eyes.	
Measures in case of dust release	: Avoid dust formation.	
6.1.2. For emergency responders		
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	

6.2. Environmental precautions

Avoid release to the environment. Do not flush into surface water or sewer system. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
Methods for cleaning up	: Mechanically recover the product. Contain leaking substance, pump over in suitable containers. Clean contaminated surfaces with an excess of water.	
Other information	: Dispose of materials or solid residues at an authorized site. Do not allow to enter drains or water courses.	

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling Hygiene measures	 Avoid dust formation. Ensure good ventilation of the work station. Local exhaust is recommended where dust may occur. Avoid contact with skin and eyes. Wear recommended personal protective equipment. Store tightly closed in a dry and cool place. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product.
7.2. Conditions for safe storage, including any	v incompatibilities
Technical measures	: Keep only in the original container.
Storage conditions	: Keep in a well-ventilated room. Keep container tightly closed to prevent moisture pick-up. Store in a dry, cool place. Keep out of direct sunlight. Store in a well-ventilated place. Keep cool.
Incompatible products	: Oxidizing agents, bases and reducing agents.

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Heat and ignition sources

: Keep away from ignition sources (including static discharges).

7.3. Specific end use(s)

For œnological use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

CITRIC ACID LAFFORT (5949-29-1) PNEC (Water) PNEC aqua (freshwater) ≈ 0.44 mg/l PNEC aqua (marine water) ≈ 0.044 mg/l **PNEC (Sediment)** PNEC sediment (freshwater) ≈ 34.6 mg/kg dwt PNEC sediment (marine water) ≈ 3.46 mg/kg dwt PNEC (Soil) PNEC soil ≈ 33.1 mg/kg dwt PNEC (STP) > 1000 mg/l PNEC sewage treatment plant

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid dust formation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure the ventilation system is regularly maintained and tested.

8.2.2. Personal protection equipment

Personal protective equipment:

Refer to protective measures listed in Sections 7 and 8.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Use eye protection according to EN 166, designed to protect against powders and dusts. Safety glasses with side shields. Safety glasses

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Eye protection			
Туре	Field of application	Characteristics	Standard
Safety glasses	Dust	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Skin and body protection	
Туре	Standard
Chemically resistant protective gloves	EN 374

Hand protection:

Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Protective gloves. ISO 374-1

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves	Natural rubber	6 (> 480 minutes)	0.5		EN ISO 374
Chemically resistant protective gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.35		EN ISO 374
Chemically resistant protective gloves	Butyl rubber	6 (> 480 minutes)	0.5		EN ISO 374
Chemically resistant protective gloves	Polyvinylchloride (PVC)	6 (> 480 minutes)	0.5		EN ISO 374

Other skin protection

Materials for protective clothing:

Wear suitable protective clothing. Long sleeved protective clothing. acid resistant clothing

8.2.2.3. Respiratory protection

Respiratory protection:

No special protection required where adequate ventilation is maintained. Wear suitable respiratory equipment in case of insufficient ventilation. EN 143. EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not allow into drains or water courses. Avoid release to the environment.

Other information:

Do not eat, drink or smoke during work. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

SECTION 9: Physical and chemical properties		
9.1. Information on basic phys	sical and chemical properties	
Physical state	: Solid	

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Colour	: white.
Appearance	: Crystals.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: ≈ 153 °C 1.013 hPa
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: >100 °C
рН	: Not available
pH solution	: ≈ 1.7 100g/L - 20°C
Viscosity, kinematic	: Not applicable
Solubility	: Soluble in ethanol.
	Water: ≈ 590 g/l 20°C
Partition coefficient n-octanol/water (Log Kow)	: -0.2 – -1.8 20°C
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: ≈ 1.665 g/cm ³ 20°C
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Exothermic reaction on contact with : Oxidizing agents, bases and reducing agents. on contact with reactive metals (AI, K, Zn ...).

10.4. Conditions to avoid

Heat. flames or sparks. Moisture.

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10.5. Incompatible materials

Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : See Section 5.

11.1. Information on hazard classes as def	fined in Regulation (EC) No 1272/2008
Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Citric acid monohydrate - E330 (5949-29-	1)
LD50 oral rat	≈ 5400 mg/kg bodyweight
LD50 oral	5400 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 959 CL: 4500 - 6400
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal	> 2000 mg/kg bodyweight
Skin corrosion/irritation	 Slightly irritant but not relevant for classification (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Severe eye irritation
Additional information	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause respiratory irritation. (Based on available data, the classification criteria are not met)
Citric acid monohydrate - E330 (5949-29-	1)
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	 Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Citric acid monohydrate - E330 (5949-29-	1)
LOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	4000 mg/kg bodyweight Animal: rat
Aspiration hazard	 Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
CITRIC ACID LAFFORT (5949-29-1)	
Viscosity, kinematic	Not applicable
11.2. Information on other hazards	

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SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general Hazardous to the aquatic environment, short-term	 The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Not classified (Based on available data, the classification criteria are not met) (Based on available
(acute) Hazardous to the aquatic environment, long-term (chronic)	 data, the classification criteria are not met) Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Citric acid monohydrate - E330 (5949-29-1)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	1535 mg/l 24h
EC50 - Other aquatic organisms [1]	> 50 mg/l Test organisms (species): other aquatic crustacea:
NOEC (acute)	425 mg/l 8 days
NOEC chronic algae	≈ 425 mg/l
12.2. Persistence and degradability	
Citric acid monohydrate - E330 (5949-29-1)	
Persistence and degradability	Biodegradable.
12.3. Bioaccumulative potential	
CITRIC ACID LAFFORT (5949-29-1)	
Partition coefficient n-octanol/water (Log Kow)	-0.2 – -1.8 20°C
Citric acid monohydrate - E330 (5949-29-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.2 – -1.8 20°C
Partition coefficient n-octanol/water (Log Kow)	≈ -1.7 20°C
Bioaccumulative potential	There is no bioaccumulation.
12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Endocrine disrupting properties	
No additional information available	
12.7. Other adverse effects	
Other adverse effects	: No other effects known,Do not allow to enter drains or water courses
SECTION 13: Disposal considerations	

13.1. Waste treatment methods	
Waste treatment methods Sewage disposal recommendations	 Dispose of contents/container in accordance with licensed collector's sorting instructions. Do not flush into surface water or sewer system.

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Product/Packaging disposal recommendations

: Empty remaining contents. Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number	
UN-No. (ADR)	: Not regulated
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated
UN-No. (ADN)	: Not regulated
UN-No. (RID)	: Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Proper Shipping Name (ADN)	: Not regulated
Proper Shipping Name (RID)	: Not regulated
14.3. Transport hazard class(es)	
ADR	
Transport hazard class(es) (ADR)	: Not regulated
IMDG	
Transport hazard class(es) (IMDG)	: Not regulated
Transport hazard class(es) (IATA)	: Not regulated
ADN	
Transport hazard class(es) (ADN)	: Not regulated
RID	
Transport hazard class(es) (RID)	: Not regulated
14.4. Packing group	
Packing group (ADR)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated
14.5. Environmental hazards	
Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available
14.6. Special precautions for user	
Overland transport Not regulated	
Transport by sea	
Not regulated	

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Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Not listed on REACH Annex XVII Not listed on the REACH Candidate List Not listed on REACH Annex XIV (Authorisation List) Not listed on the PIC list (Regulation EU 649/2012) Not listed on the POP list (Regulation EU 2019/1021)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

15.1.2. National regulations

Germany	
Water hazard class (WGK)	: Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed
Denmark	
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product
15.2. Chemical safety assessment	

A chemical safety assessment has been carried out No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Revision - See : *.

Indication of changes			
Section	Changed item	Change	Comments
1.2	Function or use category	Removed	
1.2	Restrictions on use	Modified	
1.2	Use of the substance/mixture	Added	

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Indication of changes			
Section	Changed item	Change	Comments
1.2	Use of the substance/mixture	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Added	
4.2	Symptoms/effects after skin contact	Added	
4.2	Symptoms/effects after inhalation	Added	
4.2	Symptoms/effects after ingestion	Added	
5.1	Suitable extinguishing media	Added	
5.2	Hazardous decomposition products in case of fire	Modified	
5.2	Reactivity in case of fire	Added	
5.3	Firefighting instructions	Added	
6.1	General measures	Added	
6.1	Emergency procedures	Added	
6.2	Environmental precautions	Added	
6.3	Other information	Added	
7.1	Hygiene measures	Added	
7.1	Precautions for safe handling	Added	
7.2	Heat and ignition sources	Added	
7.2	Storage conditions	Added	
7.3	Specific end uses	Added	
8.2	Appropriate engineering controls	Added	
8.2	Respiratory protection	Modified	
10.6	Hazardous decomposition products	Modified	
11.1	Reason for no classification	Added	
12.	Reason for no classification	Added	
12.6	Other adverse effects	Added	

Abbreviations and acronyms:				
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways			
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road			
ATE	Acute Toxicity Estimate			
BCF	Bioconcentration factor			
BLV	Biological limit value			
BOD	Biochemical oxygen demand (BOD)			
COD	Chemical oxygen demand (COD)			
DMEL	Derived Minimal Effect level			
DNEL	Derived-No Effect Level			
EC-No.	European Community number			

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:				
EC50	Median effective concentration			
EN	European Standard			
IARC	International Agency for Research on Cancer			
ΙΑΤΑ	International Air Transport Association			
IMDG	International Maritime Dangerous Goods			
LC50	Median lethal concentration			
LD50	Median lethal dose			
LOAEL	Lowest Observed Adverse Effect Level			
NOAEC	No-Observed Adverse Effect Concentration			
NOAEL	No-Observed Adverse Effect Level			
NOEC	No-Observed Effect Concentration			
OECD	Organisation for Economic Co-operation and Development			
OEL	Occupational Exposure Limit			
РВТ	Persistent Bioaccumulative Toxic			
PNEC	Predicted No-Effect Concentration			
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail			
SDS	Safety Data Sheet			
STP	Sewage treatment plant			
ThOD	Theoretical oxygen demand (ThOD)			
TLM	Median Tolerance Limit			
VOC	Volatile Organic Compounds			
CAS-No.	Chemical Abstract Service number			
N.O.S.	Not Otherwise Specified			
vPvB	Very Persistent and Very Bioaccumulative			
ED	Endocrine disrupting properties			

Full text of H- and EUH-statements:		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H319	Causes serious eye irritation.	
H335	May cause respiratory irritation.	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

Annex to the safety data sheet					
Identified Uses	Es N°	Short title	Page		
Use of citric acid as an intermediate.	1		Error! Bookmark not defined.		
Use of citric acid formulation into preparations/mixtures.	2		Error! Bookmark not defined.		
Use of citric acid in personal care products.	3		Error! Bookmark not defined.		
Use of citric acid in detergents and cleaning products.	4		Error! Bookmark not defined.		
Use of citric acid in paper industry.	5		Error! Bookmark not defined.		
Use of citric acid in construction products.	6		Error! Bookmark not defined.		
Use of citric acid in polymers and plastics.	7		Error! Bookmark not defined.		
Use of citric acid in oil industry.	8		Error! Bookmark not defined.		
Use of citric acid in paints and coatings.	9		Error! Bookmark not defined.		
Use of citric acid in photography products.	10		Error! Bookmark not defined.		
Use of citric acid in textiles.	11		Error! Bookmark not defined.		
Use of citric acid in laboratory agents.	12		Error! Bookmark not defined.		

Safety Data Sheet

Identified Uses	Es N°	Short title	Page
Use of citric acid in water treatment.	13		Error! Bookmark not defined.
Use of citric acid in treatment of metals & surfaces.	14		Error! Bookmark not defined.
Use of citric acid agricultural applications.	15		Error! Bookmark not defined.
Use of citric acid in medical devices.	16		Error! Bookmark not defined.

Annex to the safety data sheet: Exposure scenario CAS-No.: 5949-29-1 Product form: Substance Physical state: Solid Substance type: Mono-constituent