

according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 1 of 11

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

1.1. Product identifier

Citric Acid 1.0 mol/l

UFI:

CM3C-0114-Q000-3QT5

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

Use of the substance/mixture

Use as laboratory reagent. The product is intended for research, analysis and scientific education.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	MORPHISTO GmbH	
Street:	Schumannstr. 144	
Place:	D-63069 Offenbach	
Telephone:	+49 (0) 69 / 400 3019-60	Telefax: +49 (0) 69 / 400 3019-64
E-mail:	info@morphisto.de	
Contact person:	Morphisto GmbH	
E-mail:	gefahrstoffmanagement@morphisto.de	e
Internet:	http://www.morphisto.de	
1.4. Emergency telephone	Morphisto GmbH, Tel: +49(0)69 400 3	019-60, Mo-Fr.: 09-16 Uhr

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Corr. 1; H314 Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

The mixture was classified as corrosive precautionary due to an extreme pH-value.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

citric acid

Signal word:

Pictograms:





Hazard statements

H314

Causes severe skin burns and eye damage.

Precautionary statements

P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 2 of 11

P310

Immediately call a POISON CENTER/doctor.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

in aqueous solution

Relevant ingredients

CAS No	Chemical name	Chemical name				
	EC No	EC No Index No REACH No				
	Classification (GB CLP Regulation)					
77-92-9	citric acid	citric acid				
	201-069-1	607-750-00-3	01-2119457026-42			
	Eye Irrit. 2, STOT SE 3; H319 H335					

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	C No Chemical name			
	Specific Conc. Limits, M-factors and ATE				
77-92-9	201-069-1 citric acid				
	dermal: LD50 = >2000 mg/kg; oral: LD50 = 5400 mg/kg				

Further Information

This product contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 3 of 11

After ingestion

Observe risk of aspiration if vomiting occurs. Adverse human health effects and symptoms: Gastric perforation. Do not allow a neutralisation agent to be drunk. Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

refer to section 2 and 11.

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

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO2). Foam. Dry extinguishing powder. Water spray.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Collect in closed containers for disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Wear suitable protective clothing. (refer to section 8)



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 4 of 11

Advice on protection against fire and explosion

No special measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Handle in accordance with good industrial hygiene and safety practice. Always close containers tightly after the removal of product.

Further information on handling

Avoid contact with skin, eyes and clothes. General protection and hygiene measures: refer to section 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances.

Further information on storage conditions

Protect against: UV-radiation/sunlight. heat. frost. Recommended storage temperature: 15-25 °C

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PNEC values

CAS No	Substance		
Environmenta	I compartment	Value	
77-92-9	citric acid		
Freshwater		0,44 mg/l	
Marine water		0,044 mg/l	
Freshwater sediment		34,6 mg/kg	
Marine sediment		3,46 mg/kg	
Micro-organisms in sewage treatment plants (STP)		1000 mg/l	
Soil		33,1 mg/kg	

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation. Use extractor hood (laboratory).

Individual protection measures, such as personal protective equipment



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 5 of 11

Eye/face protection

Suitable eye protection: goggles. Tightly sealed safety glasses. EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. In case of prolonged or frequently repeated skin contact: Wear suitable gloves. EN ISO 374

Suitable material:

CR (polychloroprenes, Chloroprene rubber). (0,5 mm)

NBR (Nitrile rubber). (0,35 mm)

Butyl rubber. (0,5 mm)

FKM (fluororubber). (0,4 mm)

penetration time (maximum wearing period): >=480 min

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing. Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

In case of inadequate ventilation wear respiratory protection. With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

generation/formation of aerosols

Generation/formation of mist

Suitable respiratory protective equipment:

Combination filtering device (EN 14387) Type : A / P2/P3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Details on the requirements for use and maximum concentrations can be found in the "Rules for the use of respiratory protective devices" (BGR 190).

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Colour: Odour:	liquid colourless characteristic	
Melting point/freezing point: Boiling point or initial boiling po boiling range:	int and	not determined ~100 °C
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		>60 °C

Test method

N/A

N/A



according to UK REACH Regulation

	Citric Acid 1.0 mol/l	
Revision date: 15.04.2024	Product code: 15207.xxxxx	Page 6 of 11
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	1-2	N/A
Viscosity / kinematic:	not determined	
Water solubility:	completely miscible	
(at 20 °C)		
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	23 hPa	
(at 20 °C)	1.07 a/am3	
Density (at 20 °C): Relative vapour density:	1,07 g/cm³ not determined	
Particle characteristics:	not applicable	
	ποι αρριεαδίε	
9.2. Other information		
Information with regard to physical hazard	Classes	
Explosive properties		
The product is not: Explosive. Oxidizing properties		
none		
Other safety characteristics		
Evaporation rate:	not determined	
Solid content:	not determined	
Viscosity / dynamic:	not determined	
Further Information		
No information available.		
SECTION 10: Stability and reactivity		
10.1. Reactivity		
No information available.		
10.2. Chemical stability		
Stable under normal storage and handling	conditions	
10.3. Possibility of hazardous reactions		
	s, Oxidizing agent. Reacts with : Alkalis (alkalis).	
	s, Oxidizing agent. Reacts with Airais (airais).	
10.4. Conditions to avoid No information available.		
10.5. Incompatible materials Keep away from: Base, Oxidizing agent, F	Peroxides. Oxidizing agents, strong. Alkalis (alkali	s).
10.6. Hazardous decomposition products In case of fire may be liberated: Carbon d	ioxide (CO2). Carbon monoxide	
SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined	in GB CLP Regulation	
Acute toxicity Based on available data, the classificatior		

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 7 of 11

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
77-92-9	citric acid					
	oral	LD50 mg/kg	5400	Mouse	ECHA	
	dermal	LD50 mg/kg	>2000	Rat	ECHA	

Irritation and corrosivity

Causes severe skin burns and eye damage. (On basis of test data) Causes serious eye damage. (On basis of test data)

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain any substance that has endocrine disrupting properties in humans as no ingredient meets the criteria.

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
77-92-9	citric acid						
	Acute fish toxicity	LC50	440 mg/l		Leuciscus idus (golden orfe)	ECHA	
	Acute crustacea toxicity	EC50 mg/l	1535		Daphnia magna (Big water flea)	ECHA	

12.2. Persistence and degradability

The product has not been tested.

Chemical name					
Method	Value		d	Source	
Evaluation	·	-			
citric acid					
Biodegradability	97 %		28		
Readily biodegradable (according to OECD criteria).					
	Method Evaluation citric acid Biodegradability	Method Value Evaluation	Method Value Evaluation citric acid Biodegradability 97 %	Method Value d Evaluation citric acid Biodegradability 97 % 28	Method Value d Source Evaluation

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 8 of 11

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
77-92-9	citric acid	-1,64

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

The product has not been tested.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste code numbers/waste descriptions must be carried out in accordance with the AVV, industry- and process-specifically. (Note: The waste code numbers/waste descriptions according to the AVV must be listed)

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

060106 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of acids; other acids; hazardous waste

List of Wastes Code - used product

060106 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of acids; other acids; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Inland waterways transport (ADN)	
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.



according to UK REACH Regulation

Revision date: 15.04.2024	Citric Acid 1.0 mol/l Product code: 15207.xxxx Page 9	of 11
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
Marine transport (IMDG)		
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.	
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.	
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
Air transport (ICAO-TI/IATA-DGR)		
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.	
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.	
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
<u>14.5. Environmental hazards</u>		
ENVIRONMENTALLY HAZARDOUS:	No	
14.7. Maritime transport in bulk according to Not restricted	to IMO instruments	
SECTION 15: Regulatory information 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture		
15.1. Salety, health and environmental regi	liations/legislation specific for the substance of mixture	
EU regulatory information		
EU regulatory information Restrictions on use (REACH, annex XVII)		
EU regulatory information		
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive	r.	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information	Not subject to 2012/18/EU (SEVESO III)	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s	r.	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s National regulatory information	: Not subject to 2012/18/EU (SEVESO III) ense of regulation (EC) No 1272/2008 [GHS].	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s	: Not subject to 2012/18/EU (SEVESO III) ense of regulation (EC) No 1272/2008 [GHS]. Observe restrictions to employment for juveniles according to the 'juvenile	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s National regulatory information	: Not subject to 2012/18/EU (SEVESO III) ense of regulation (EC) No 1272/2008 [GHS]. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s National regulatory information Employment restrictions: Water hazard class (D):	: Not subject to 2012/18/EU (SEVESO III) ense of regulation (EC) No 1272/2008 [GHS]. Observe restrictions to employment for juveniles according to the 'juvenile	
EU regulatory information Restrictions on use (REACH, annex XVII) Entry 3, Entry 75 Information according to Directive 2012/18/EU (SEVESO III): Additional information This preparation is hazardous in the s National regulatory information Employment restrictions: Water hazard class (D): 15.2. Chemical safety assessment	: Not subject to 2012/18/EU (SEVESO III) ense of regulation (EC) No 1272/2008 [GHS]. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).	

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16. Rev. 1.00; 02.03.2015, Initial release Rev. 2,0; 15.04.2024; general adjustment(s)



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxxx

Page 10 of 11

Abbreviations and acronyms Skin Corr: Skin corrosion Eye Dam: Eye damage Eye Irrit: Eye irritation STOT SE: Specific target organ toxicity - single exposure ADR: Accord européen sur le transport des marchandises dangereuses par Route CAS Chemical Abstracts Service DNEL: Derived No Effect Level IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany) I OAFL: I owest observed adverse effect level LOAEC: Lowest observed adverse effect concentration LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent NOAEL: No observed adverse effect level NOAEC: No observed adverse effect level NTP: National Toxicology Program N/A: not applicable OSHA: Occupational Safety and Health Administration PNEC: predicted no effect concentration PBT: Persistent bioaccumulative toxic RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) SARA: Superfund Amendments and Reauthorization Act SVHC: substance of very high concern TRGS Technische Regeln fuerGefahrstoffe TSCA: Toxic Substances Control Act VOC: Volatile Organic Compounds VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe WGK: Wassergefaehrdungsklasse CLP: Classification, labelling and Packaging REACH: Registration, Evaluation and Authorization of Chemicals GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals UN: United Nations CAS: Chemical Abstracts Service DNEL: Derived No Effect Level DMEL: Derived Minimal Effect Level PNEC: Predicted No Effect Concentration ATE: Acute toxicity estimate LL50: Lethal loading, 50% EL50: Effect loading, 50% EC50: Effective Concentration 50% ErC50: Effective Concentration 50%, growth rate NOEC: No Observed Effect Concentration BCF: Bio-concentration factor PBT: persistent, bioaccumulative, toxic vPvB: very persistent, very bioaccumulative ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)



according to UK REACH Regulation

Citric Acid 1.0 mol/l

Revision date: 15.04.2024

Product code: 15207.xxxx

Page 11 of 11

RID: Regulations concerning the international carriage of dangerous goods by rail ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures) EmS: Emergency Schedules MFAG: Medical First Aid Guide MARPOL: International Convention for the Prevention of Marine Pollution from Ships IBC: Intermediate Bulk Container For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations). EC/EEC: European Community/European Economic Community EU: European Union M-factor: Multiplying factor IATA: International Air Transport Association DGR: Dangerous Goods Regulations ICAO: International Civil Aviation Organization TI: Technical Instructions

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

H335

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)