SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

CITRIC ACID MONOHYDRATE

Version 2.1

Print Date 2011/06/22

Revision Date 2011/06/22

MSDS code: MCIT200

1.   Identification of the substance/mixture and of the company/undertaking

1.1.   Product identifier

Trade name	:	CITRIC ACID MONOHYDRATE
Substance name	:	Citric acid, monohydrate
CAS-No.	:	5949-29-1
EC-No.	:	201-069-1

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

Use of the Substance/Mixture	:	At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.
Recommended restrictions on use	:	At that time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

1.3.   Details of the supplier of the safety data sheet

Company	:	Brenntag UK & Ireland Albion House, Rawdon Park GB LS19 7XX Leeds Yeadon
Telephone	:	0113 3879 200
Telefax	:	0113 3879 280
E-mail address	:	msds@brenntag.co.uk

1.4.   Emergency telephone number

Emergency telephone number	:	Emergency only telephone number (open 24 hours): 01865 407333 (N.C.E.C. Culham)

2.   Hazards identification

2.1.   Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Serious eye damage/eye irritation	Category 2	---	H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

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Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	**Risk phrases**
Irritant (Xi)	R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

Potential environmental effects	:	See section 12 for environmental information. No further information available.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :

Signal word	:	Warning	
Hazard statements	:	H319	Causes serious eye irritation.

Precautionary statements

Prevention	:	P264	Wash hands thoroughly after handling.
		P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response	:	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.

Additional Labelling:

EUH210 Safety data sheet available on request.

Hazardous components which must be listed on the label:

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• Citric acid, monohydrate

2.3.   Other hazards

No other information is available.

3.   Composition/information on ingredients

3.1.   Substances

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
Citric acid, monohydrate				
CAS-No. : 5949-29-1 EC-No. : 201-069-1	<= 100	Eye Irrit.2	H319	Xi; R36

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4.   First aid measures

4.1.   Description of first aid measures

If inhaled   : Remove to fresh air. If symptoms persist, call a physician.

In case of skin contact   : Wash off immediately with soap and plenty of water. If
                                          symptoms persist, call a physician.

In case of eye contact   : Immediately flush eye(s) with plenty of water. If symptoms
                                          persist, call a physician.

If swallowed   : Clean mouth with water and drink afterwards plenty of water. If
                                          symptoms persist, call a physician.

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

Symptoms   : No further information available.

Effects   : No further information available.

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

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Treatment	: Treat symptomatically. No further information available.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting	: Hazardous decomposition products formed under fire conditions. Carbon oxides

5.3. Advice for firefighters

Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus.
Further information	: No further information available.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	: Wear personal protective equipment. Keep people away from and upwind of spill/leak. Avoid dust formation.

6.2. Environmental precautions

Environmental precautions	: Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up	: Use mechanical handling equipment. Keep in suitable, closed containers for disposal. Flush with plenty of water.

6.4. Reference to other sections

For personal protection see section 8.

7. Handling and storage

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7.1.   Precautions for safe handling

Advice on safe handling	: Avoid dust formation. Keep tightly closed in a dry and cool place. Provide for appropriate exhaust ventilation and dust collection at machinery.
Hygiene measures	: Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday. Avoid contact with skin and eyes. Avoid dust formation.

7.2.   Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	: No special storage conditions required.
Advice on protection against fire and explosion	: Avoid dust formation. Fine dust dispersed in air may ignite.
Further information on storage conditions	: Keep container tightly closed. Keep in a dry place. Avoid moisture.
Advice on common storage	: Incompatible with oxidizing agents. alkalis
German storage class	: 11 Combustible Solids

7.3.   Specific end uses

Specific use(s)	: No information available.

8.   Exposure controls/personal protection

8.1.   Control parameters

Other OELs
(Additional) Information : Contains no substances with occupational exposure limit values.

8.2.   Exposure controls

Engineering measures
Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

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Respiratory protection

Advice	:	Required if dust is released Dust-mask Particle filter:P2 Particle filter:P3

Hand protection

Advice	:	Protective gloves The following materials are suitable: natural rubber Nitrile rubber butyl-rubber PVC

Eye protection

Advice	:	Safety glasses

Skin and body protection

Advice	:	Protective suit

Environmental exposure controls

General advice	:	Do not flush into surface water or sanitary sewer system.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	solid
Colour	:	white
Odour	:	odourless
Odour Threshold	:	no data available
pH	:	1.8 (50 g/l; 20 °C)
Melting point/range	:	135 - 152 °C
Boiling point	:	no data available

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Flash point	:	not applicable
Evaporation rate	:	not applicable
Flammability (solid, gas)	:	does not ignite
Upper explosion limit	:	not applicable
Lower explosion limit	:	not applicable
Vapour pressure	:	not applicable
Relative vapour density	:	not applicable
Density	:	1.54 g/cm3 (20 °C)
Water solubility	:	676 g/l (25 °C soluble
Partition coefficient: n-octanol/water	:	no data available
Ignition temperature	:	no data available
Thermal decomposition	:	> 170 °C To avoid thermal decomposition, do not overheat.
Viscosity, kinematic	:	not applicable
Explosive properties	:	EU legislation: Dust may form explosive mixture in air.
Oxidizing properties	:	not oxidising

9.2. Other information

Bulk density	:	550 - 950 kg/m3 (20 °C)

10. Stability and reactivity

10.1. Reactivity

Advice   : No decomposition if stored and applied as directed.

10.2. Chemical stability

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Advice	:	Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions	:	Exothermic reaction with: Oxidizing agents Reducing agents Bases With most metals.
Hazardous reactions	:	Dust can form an explosive mixture in air.

10.4. Conditions to avoid

Thermal decomposition	:	>170 °C To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Materials to avoid	:	Incompatible with strong bases and oxidizing agents.
	:	Strong acids

10.6. Hazardous decomposition products

Hazardous decomposition products	:	Carbon oxides

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Oral

LD50 Oral	:	5400 mg/kg (mouse) (OECD Test Guideline 401)
LD50	:	3000 mg/kg (rat)

Irritation
Skin

Result	:	May cause skin irritation in susceptible persons.

Eyes

Result	:	Irritating to eyes.

Sensitisation

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Result : not sensitizing

12. Ecological information

12.1. Toxicity

Acute toxicity
Fish
applies to anhydrous substance
LC50 : 440 - 760 mg/l (Leuciscus idus (Golden orfe); 96 h)
Bacteria
applies to anhydrous substance

Component: Citric acid, monohydrate	CAS-No. 5949-29-1
Acute toxicity	
Fish	
LC50 : 1516 - 1710 mg/l (Lepomis macrochirus; 96 h)	
Toxicity to daphnia and other aquatic invertebrates.	
EC100 : 120 mg/l (Daphnia magna; 72 h)	
algae	
EC0 : 640 mg/l (Scenedesmus quadricauda (Green algae); 168 h)	
Bacteria	
EC50 : > 10000 mg/l (Pseudomonas putida)	

12.2. Persistence and degradability

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Persistence and degradability
Biodegradability

Result	:	98 % (Exposure Time: 2 d) Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation

Result	:	Does not bioaccumulate. completely soluble

12.4. Mobility in soil

Mobility

Result	:	no data available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Result	:	This information is not available.

12.6. Other adverse effects

Additional ecological information

Result	:	Do not flush into surface water or sanitary sewer system.

13. Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Do not let product enter drains. Can be landfilled, when in compliance with local regulations.

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Contaminated packaging	:	Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Clean container with water.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

14. Transport information

Not dangerous goods for ADR, RID and IMDG.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

15. Regulatory information

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

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Other regulations	:	Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical Safety Assessment

Currently we do not have any Information from our supplier about this.

16.   Other information

Full text of R-phrases referred to under sections 2 and 3.

R36   Irritating to eyes.

Full text of H-Statements referred to under sections 2 and 3.

H319   Causes serious eye irritation.

|| Indicates updated section.

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.
The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text