SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 28-Mar-2022 **Revision date** 30-Apr-2024 **Revision Number 0**5

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

1.1. Product identifier

Product Code(s)	F5003402 & F5003502
Safety data sheet number	C6043701-05***
Product Name	Ultraclean CTA - CITRIC ACID ANHYDROUS
Index No	607-750-00-3***
EC Number	201-069-1***
CAS No	77-92-9***
Synonyms	2-HYDROXY 1,2,3 PROPANE TRICARBOXYLIC ACID, CITRIC ACID ANHYDROUS BP2003/E330/USP27, CITRIC ACID ANH FG 30-100 M, CITRIC ACID ANHYDROUS F6000, CITRIC ACID ANHYDROUS N1560, CITRIC ACID 0AQ FCC ed7, CITRIC ACID WV, CITRIC ACID 0AQ, CITRIC ACID WV GRAN, CITRIC ACID ANH E330 12-40M LT, CITRIC ACID ANH E330 16-40M YX, CITRIC ACID ANH E330 MG 1200 CB, CITRIC ACID ANH JBN, CITRIC ACID ANHYDROUS F4020, CITRIC ACID ANHYDROUS FINE GRANULAR 51N, CITRIC ACID ANHY WFG JBN, CITRIC ACID ANH LTY JBN, CITRIC ACID ANH JGY JBN, CITRIC ACID ANH WEY JBN, CITRIC ACID ANH P250 PH, CITRIC ACID ANHDROUS F0000, CITRIC ACID ANHDROUS F6040, CITRIC ACID ANHDROUS F7040, CITRIC ACID ANHDROUS G3015, CITRIC ACID ANHDROUS F3500, CITRIC ACID ANHDROUS F2500, CITRIC ACID ANH N1560 FG/PH, CITRIC ACID ANH E330 12 40M RZ, CITRIC ACID ANH N1500 FG/PH, CITRIC ACID ANH 1200 CBE, CITRIC ACID ANHYDROUS 12-40 SUNSHINE, CITRIC ACID ANH E330 12-40M CF, CITRIC ACID ANH MCS, CITRIC ACID ANH S40, CITRIC ACID ANH POWDER CBE***
Pure substance/mixture	Substance***

Contains CITRIC ACID ANHYDROUS

Molecular weight 192.12***

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

Recommended use Food industry Cosmetics Industrial application Pharmaceutical Food/Feed additive Personal care***

1.3. Details of the supplier of the safety data sheet

Supplier

Ultrawave Ltd
Unit 14/15, Eastgate Business Park
Cardiff, CF3 2EY
UK

For further information, please contact

E-mail address sales@ultrawave.co.uk
Non-Emergency Telephone Number +44 (0)29 2083 7337

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2*** - (H319)***
Specific target organ toxicity — single exposure	Category 3*** - (H335)***
Category 3*** Respiratory irritation***	

2.2. Label elements

Contains CITRIC ACID ANHYDROUS

Signal word
Warning***

Hazard statements
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation***

Precautionary statements
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear eye protection/ face protection
P501 - Dispose of contents/ container to an approved waste disposal plant***

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances***

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
CITRIC ACID ANHYDROUS*** 77-92-9	90 - 100%	201-069-1 (607-750-00-3)***	-	Eye Irrit. 2 (H319) STOT SE 3 (H335)***	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.***
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.***
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.***
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.***
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).***

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

Symptoms	May cause redness and tearing of the eyes. Burning sensation.***
Inhalation	May cause respiratory irritation.***
Eyes	May cause redness and tearing of the eyes. Causes serious eye irritation.***
Dermal	May cause slight irritation.***

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

Note to doctors	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.***
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Carbon oxides.***

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.***
Other information	Refer to protective measures listed in Sections 7 and 8.***

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment.***

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.***

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep at temperatures between 10 and 30 °C.***

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers No information available

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC) ***

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
CITRIC ACID ANHYDROUS*** 77-92-9	0.44 mg/l***		0.044 mg/l***		
Chemical name	**Freshwater sediment**	**Marine sediment**	**Sewage treatment**	**Soil**	**Food chain**
CITRIC ACID ANHYDROUS*** 77-92-9	34,6 mg/kg***	3,46 mg/kg***	> 1000 mg/l***	33,1 mg/kg***	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.***

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.***

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)***	Nitrile rubber***	0.3 mm***	8.0 hours***

Skin and body protection Wear suitable protective clothing.***

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.***

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid***
Appearance	Crystalline powder***
Colour	white***
Odour	Odourless.***
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	~*** 153*** °C***	***
Initial boiling point and boiling range	> *** 175*** °C***	***
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	345*** °C***	Closed cup.***
Autoignition temperature		No information available.
Decomposition temperature	175*** °C***	***
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	6.5*** mPa s***	@ 20 °C.***
Water solubility	Soluble in water***	***
Solubility(ies)	Soluble in the following materials:, Ethanol***	***
Partition coefficient	log Pow: -1.72***	***
Vapour pressure	0.0002 hPa***	@ 25 °C.***
Relative density	1.665***	20 °C.***
Bulk density	400 - 1300 kg/m³***	***
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	~ 0.075 - 2.8 mm***	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.***	
Oxidising properties	Does not meet the criteria for classification as oxidising***	

9.2. Other information

Molecular weight	192.12***

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable under recommended storage conditions.***

10.2. Chemical stability

Stability	Stable under normal conditions.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Dust can form an explosive mixture with air.***

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.***

10.5. Incompatible materials

Incompatible materials Strong oxidising agents. Reducing agent. Strong bases. Metals.***

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.***

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information ***

Inhalation May cause respiratory irritation.***

Eye contact Causes serious eye irritation.***

Skin contact May cause slight irritation.***

Ingestion Gastrointestinal discomfort.***

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes.***

Acute toxicity

Numerical measures of toxicity ***

Component Information ***

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
CITRIC ACID ANHYDROUS***	5 400 mg/kg (Mouse)***	> 2000 mg/kg (Rat)***	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.***

CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404***	Rabbit***	Dermal***			non-irritant***

Serious eye damage/eye irritation Causes serious eye irritation.***

CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405***	Rabbit***	eye***			Irritant***

Respiratory or skin sensitisation No information available.

CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Exposure route	Results
		Dermal***	Not a skin sensitiser***
		Inhalation***	No sensitisation responses were observed***

Germ cell mutagenicity No information available.

Component Information
CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Results
		Not mutagenic***

Carcinogenicity No information available.

Component Information
CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Results
		Not Carcinogenic***

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.***

CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause respiratory irritation***

STOT - repeated exposure No information available.

Component Information
CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified***

Aspiration hazard No information available.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.***

CITRIC ACID ANHYDROUS (77-92-9)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test***	Leuciscus idus***	LC50***	440 - 760 mg/L***	48 hours***	
	Daphnia magna***	EC50***	1 535 mg/L***	24 hours***	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test***	Scenedesmus quadricauda***	NOEC***	425 mg/L***	8 days***	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
CITRIC ACID ANHYDROUS***	-	LC50: =1516mg/L (96h, Lepomis macrochirus)***	-	-

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.***

CITRIC ACID ANHYDROUS (77-92-9)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)***	28 days***	97 % Biodegradation***	Readily biodegradable***

12.3. Bio accumulative potential

Bioaccumulation Not likely to bioaccumulate.***

Component Information ***

Chemical name	Partition coefficient
CITRIC ACID ANHYDROUS***	-1.72***

12.4. Mobility in soil

Mobility in soil Soluble in water.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment. The product does not contain any substances classified as PBT or vPvB

Chemical name	PBT and vPvB assessment
CITRIC ACID ANHYDROUS***	The substance is not PBT / vPvB***

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods.

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations ***

Authorisations and/or restrictions on use:
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).
This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)
Not applicable

The Ozone-Depleting Substances Regulations 2015
Not applicable

The Biocidal Products Regulations 2001 (as amended)***

Chemical name	The Biocidal Products Regulations 2001 (as amended)
CITRIC ACID ANHYDROUS*** - 77-92-9	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals***

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)
Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)
Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA -	United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL -	Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS -	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS -	Japan Existing and New Chemical Substances
IECSC -	China Inventory of Existing Chemical Substances
KECL -	Korean Existing and Evaluated Chemical Substances
PICCS -	Philippines Inventory of Chemicals and Chemical Substances
AIIC -	Australian Inventory of Industrial Chemicals
NZIoC -	New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance***

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet.

Full text of H-Statements referred to under section 3
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation***

Legend SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note: ***Indicates updated data since last publication.

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity***	Calculation method***
Acute dermal toxicity***	Calculation method***
Acute inhalation toxicity - gas***	Calculation method***
Acute inhalation toxicity - vapour***	Calculation method***
Acute inhalation toxicity - dust/mist***	Calculation method***
Skin corrosion/irritation***	Calculation method***
Serious eye damage/eye irritation***	Calculation method***
Respiratory sensitisation***	Calculation method***
Skin sensitisation***	Calculation method***
Mutagenicity***	Calculation method***
Carcinogenicity***	Calculation method***
Reproductive toxicity***	Calculation method***
STOT - single exposure***	Calculation method***
STOT - repeated exposure***	Calculation method***
Acute aquatic toxicity***	Calculation method***
Chronic aquatic toxicity***	Calculation method***
Aspiration hazard***	Calculation method***
Ozone***	Calculation method***

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By	Jitendra Panchal
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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended) Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet