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

1.1. Product identifier

Acid citricum anhydr fine gran 700

Item No. 06015500

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

Use of the substance/preparation

food additive, Manufacture of pharmaceutical products

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG
Industriestrasse 35
9100 Herisau

Telephone no.	0041 (0)71 353 58 58
E-mail address of person responsible for this SDS	sdb@haenseler.ch

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Eye Irrit. 2 H319

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Warning

Hazard statements

H319	Causes serious eye irritation.

Precautionary statements ***

P264.1	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.
P337+P313	If eye irritation persists: Get medical advice/attention.

SECTION 3: Composition/information on ingredients ***

Chemical characterization

2-Hydroxy-1,2,3-propanetricarboxylic acid

Molecular weight

Value 192.2 g/mol

Hazardous ingredients ***

citric acid

CAS No. 77-92-9
EINECS no. 201-069-1
Registration no. 01-2119457026-42
Concentration >= 50 %
Classification (Regulation (EC) No. 1272/2008)
Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Remove the casualty into fresh air and keep him calm. Irregular breathing/no breathing: artificial respiration. Do not use mouth-to-mouth or mouth-to-nose resuscitation. In the event of symptoms take medical treatment. If the patient is likely to become unconscious, place and transport in stable sideways position. Summon a doctor immediately. Keep breathing passages free.

After skin contact

Wash skin thoroughly with water (15 min.). Remove contaminated, soaked clothing immediately and dispose of safely. Summon a doctor immediately.

After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

After ingestion

Rinse mouth thoroughly with water. Take affected person to fresh air. Keep at rest. Drink water in small gulps. Do not induce vomiting. By continuous complaints consult a physician. Never give anything by mouth to an unconscious person.

Adhere to personal protective measures when giving first aid

No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

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

Irritaion of respiratory organs, Coughing

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

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water, Foam

Non suitable extinguishing media

Full water jet, Water spray jet

5.2. Special hazards arising from the substance or mixture

Forms esplosive mixture with air are possible. In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin. Keep away sources of ignition. Respiratory protection

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Take up mechanically and collect in suitable container for disposal. When picked up, treat material as prescribed under Section 13 "Disposal".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear protective equipment. Avoid contact with skin, eyes and clothing. Do not swallow. Do not inhale dust. Keep away sources of ignition. Avoid the formation and deposition of dust. Use only in well-ventilated areas. Provide good ventilation of working area (local exhaust ventilation if necessary). Wear respiratory protection when spraying. Take action to prevent static discharges. Isolate from sources of heat, sparks and open flame.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature

Value	10	-	30	°C

Requirements for storage rooms and vessels

Keep only in original packaging.

Hints on storage assembly

Do not store together with foodstuffs. Do not store with oxidizing agents. Do not store with combustible materials.

Storage classes

Storage class according to TRGS 510	13	Non- combustible solids
Storage category (Switzerland)	11/13	Other solid hazardous substances with classification/labelling hazardous

Further information on storage conditions

Protect from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from sources of ignition. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection ***

8.2. Exposure controls

General protective and hygiene measures

Wash thoroughly after work. Do not eat, drink or smoke during work time. Wash hands and face before breaks and after work. Remove contaminated, soaked clothing immediately and dispose of safely. Hold eye wash fountain available. Hold emergency shower available.

Respiratory protection

Self-contained breathing apparatus.

Hand protection

Chemical resistant gloves

Appropriate Material	nitrile rubber - NBR		
Breakthrough time	>	8	h

Eye protection

Safety glasses with side protection shield

Body protection

Protective clothing

SECTION 9: Physical and chemical properties ***

9.1. Information on basic physical and chemical properties

Form	Powder to fine granulates			
Colour	colourless to white			
Odour	odourless			
pH value				
Value		2.2		
Concentration/H2O		10	g/l	
Temperature		20	°C	
Value		1.7		
Concentration/H2O		100	g/l	
Temperature		20	°C	
Value		1.8		
Concentration/H2O		50	g/l	
Temperature		25	°C	
Melting point				
Value		153		°C
Initial boiling point and boiling range				
Value	>	175		°C
Flash point				
Value		100		°C
Method	closed cup			
Vapour pressure				
Value		0.00000 0017		mmHg
Temperature		25	°C	
Source	Estimated value			
Density				
Value		1.665		g/cm³
Temperature		20	°C	
Remarks	Relative Density according specification			
Solubility in water				

Value		592	g/l
Temperature		20 °C	

Solubility(ies)

Ethanol			
Remarks	soluble		
Diethyl ether			
Remarks	partly soluble		

Decomposition temperature

Value	>	175	°C

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

To avoid thermal decomposition, do not overheat.

10.3. Possibility of hazardous reactions

No decomposition if stored and applied as directed.

10.4. Conditions to avoid

Keep away from sources of heat and ignition. Flames. Sparks. Avoid dust formation.

10.5. Incompatible materials

Reducing agents, Acids, Alkalis

10.6. Hazardous decomposition products

In the event of fire the following can be released: Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information ***

11.1. Information on toxicological effects

Acute oral toxicity (Components)

citric acid

Species	mouse		
LD50		5400	mg/kg
Method	OECD 401		

Acute dermal toxicity (Components)

citric acid

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

Skin corrosion/irritation (Components)

citric acid

Species	rabbit		
evaluation	non-irritant		
Method	OECD 404		

citric acid

Species	rabbit		
Duration of exposure		72	h
evaluation	slightly irritant		

Serious eye damage/irritation (Components)

citric acid

evaluation	irritant		

citric acid

Species	rabbit		
Duration of exposure	72	h	
evaluation	strongly irritant		

Sensitization (Components)

citric acid

Remarks	None		

Subacute, subchronic, chronic toxicity (Components)

citric acid

Route of exposure	oral		
Species	rat		
NOAEL	1200		mg/kg
Long term			
Duration of exposure	2	y	
Remarks	negative on animals		

Mutagenicity (Components)

citric acid

Species	Salmonella typhimurium
evaluation	No experimental information on genotoxicity in vitro available.

SECTION 12: Ecological information ***

12.1. Toxicity

Fish toxicity (Components)

citric acid

Species	golden orfe (Leuciscus idus)			
LC50	440		760	mg/l

citric acid

Species	golden orfe (Leuciscus idus)	
LC50	440	mg/l
Method	OECD 203	

Daphnia toxicity (Components)

citric acid

Species	Daphnia		
EC50	120		mg/l
Duration of exposure	72	h	

citric acid

Species	Daphnia magna		
LC50	1535		mg/l
Duration of exposure	24	h	

Bacteria toxicity (Components)

Citric acid, anhydrous

EC50	>	100000	mg/l

12.2. Persistence and degradability

Biodegradability (Components)

citric acid

Value	97	%

Duration of test	28	d
evaluation	Readily biodegradable	
Method	OECD 301 B	

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Dispose of as unused product.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.

SECTION 15: Regulatory information ***

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

Water Hazard Class (Germany) ***

Water Hazard Class (Germany)	WGK 1
Remarks	Derivation of WGK according to Annex 1 No. 5.2 AwSV

SECTION 16: Other information

Hazard statements listed in Chapter 3

H319 Causes serious eye irritation.

CLP categories listed in Chapter 3

Eye Irrit. 2 Eye irritation, Category 2

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.