

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 21 Mar 2023

Print date: 4 Apr 2023

Version: 8



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## Betain Citrat

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

#### 1.1. Product identifier

Trade name/designation:

**Betain Citrat**

CAS No.:

17671-50-0

EC No.:

241-648-6

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

Use of the substance/mixture:

Intermediate for the chemical industry

#### 1.3. Details of the supplier of the safety data sheet

**Supplier (manufacturer/importer/only representative/downstream user/distributor):**

**Valsynthese S. A.**

Société Suisse des Explosifs Group

Fabrikstrasse 48

3900 Brig

Switzerland

**Telephone:** +41 27 922 71 11

**Telefax:** +41 27 922 72 00

**E-mail:** info@valsynthese.ch

**Website:** www.valsynthese.ch

**E-mail (competent person):** msds@sse-group.com

#### 1.4. Emergency telephone number

United States of America: Poison control center - national hotline number 1-800-222-1222

Great Britain: National phone number 111

Belgium: Centre antipoisons +32 070 245 245 / Bulgaria: +359 2 9154 233 / Croatia: +3851 2348

342 / Cyprus: +357 1401 / Czech Republic: +420 224 919 293, +420 224 915 402 / Denmark: +45 82

12 12 12 / Estonia: +372 16662, +372 7943 794 / Finland: +358 09 471 77 / France: numéro ORFILA

(INRS) : +33 (0)1 45 42 59 59 / Greece: +30 21077 93777 / Hungary: +36 80 201 199 (24 hours) /

Ireland: +353 (1) 809 2166 / Italy: +39 06 4997800 / Lithuania: +370 (85) 2362052 / Luxembourg:

+352 8002 5500 / The Netherlands: +31 (0) 30 274 8888 / Norway: +47 22 59 13 00 / Portugal: +351

800 250 250 / Romania: +402 213 183 606 / Slovakia: +421 2 5477 4166 / Spain: National Emergency

Telephone Number: +34 91 562 04 20 / Sweden: +46 112 (emergency 24 hours), +46 08-331231 (monfri 9.00-17.00).

European Union: Call 112 if no specific phone number available., +41 27 922 71 11 (Only available during office hours.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	Calculation method.

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### \* 2.2. Label elements

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

Hazard pictograms:



**GHS07**

Exclamation mark

Signal word: Warning

#### Hazard statements for health hazards

H319	Causes serious eye irritation.
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Supplemental hazard information: none

#### Precautionary statements Prevention

P264	Wash hands thoroughly after handling.
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P280	Wear protective gloves/eye protection.
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#### Precautionary statements 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.
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P337 + P313	If eye irritation persists: Get medical advice/attention.
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### 2.3. Other hazards

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 17671-50-0 EC No.: 241-648-6	(carboxymethyl)trimethylammonium dihydrogen citrate Eye Irrit. 2 (H319), Skin Irrit. 2 (H315)  Warning	≤ 100 weight-%

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended. Warning First aider: Pay attention to self-protection!

#### Following inhalation:

Provide fresh air. In case of respiratory tract irritation, consult a physician. Get medical advice/attention if you feel unwell.

#### In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

#### After eye contact:

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. Remove contact lenses, if present and easy to do. Continue rinsing.

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### Following ingestion:

Rinse mouth. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Get immediate medical advice/attention.

### Self-protection of the first aider:

Use personal protection equipment.

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

Serious eye damage/eye irritation.

### 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. Water spray jet, alcohol resistant foam, Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder

#### Unsuitable extinguishing media:

Full water jet

### 5.2. Special hazards arising from the substance or mixture

#### Hazardous combustion products:

Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

### 5.3. Advice for firefighters

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

### 5.4. Additional information

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

#### 6.1.1. For non-emergency personnel

##### Personal precautions:

Remove persons to safety.

##### Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

#### 6.1.2. For emergency responders

##### Personal protection equipment:

Personal protection equipment: see section 8

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it.

### 6.3. Methods and material for containment and cleaning up

#### For containment:

Take up mechanically, placing in appropriate containers for disposal. Dispose of the residus of the product as hazardous waste (see section 13).

### 6.4. Reference to other sections

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

### 6.5. Additional information

Losses during use of the product must be collected and disposed of in special containers as special waste.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Protective measures

##### Advices on safe handling:

Wear personal protection equipment (refer to section 8). Do not breathe dust.

##### Measures to prevent aerosol and dust generation:

Dust should be exhausted directly at the point of origin.

##### Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container. Do not allow to enter into surface water or drains.

##### Hints on storage assembly:

Do not store together with: Acids, alkalines, Reducing agent

Aluminium, zinc, copper (corrosion)

**Storage class (TRGS 510, Germany):** 11 – Combustible solids that cannot be assigned to any of the above storage classes

#### 7.3. Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No data available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

##### 8.2.2. Personal protection equipment



##### Eye/face protection:

Eye glasses with side protection EN 166

##### Skin protection:

Use protective gloves in accordance to EN 374. The following material is suitable: NBR Breakthrough time: > 6h.

##### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Full-/half-/quarter-face masks (EN 136/140)  
Filter type: Filter P2 or P3 (DIN EN 143)

##### 8.2.3. Environmental exposure controls

No data available

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

##### Appearance

**Physical state:** solid

**Colour:** white

**Odour:** almost odorless

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### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	2.3		② 20% in Wasser
Melting point	139 - 141 °C		
Freezing point	not determined		
Initial boiling point and boiling range	not determined		
Decomposition temperature	not determined		
Flash point	not determined		
Evaporation rate	not determined		
Auto-ignition temperature	not determined		
Upper/lower flammability or explosive limits	not determined		
Vapour pressure	not determined		
Vapour density	not determined		
Density	0.87 kg/L		
Relative density	not determined		
Bulk density	not determined		
Water solubility	1,200 g/L	20 °C	
Partition coefficient: n-octanol/water	not determined		
Dynamic viscosity	not determined		
Kinematic viscosity	not determined		

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

### 10.4. Conditions to avoid

Humidity

### 10.5. Incompatible materials

Acids, alkalines, Reducing agent  
Aluminium, copper, Zinc (corrosion)

### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity:

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

#### Acute dermal toxicity:

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

#### Acute inhalation toxicity:

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

#### Skin corrosion/irritation:

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

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### Serious eye damage/irritation:

Causes serious eye irritation.

### Respiratory or skin sensitisation:

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

### Germ cell mutagenicity:

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

### Carcinogenicity:

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

### Reproductive toxicity:

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.

### Additional information:

No data available

### \* 11.2. Information on other hazards

#### Endocrine disrupting properties:

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

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Aquatic toxicity:

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

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

**(carboxymethyl)trimethylammonium dihydrogen citrate** CAS No.: 17671-50-0 EC No.: 241-648-6

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

### \* 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

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

The product may not be eliminated as municipal solid waste nor allowed to end up in the drainage system. These packs can be delivered packaging-specific to the existing collection points for hazardous waste.

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### 13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

#### Waste code product

16 03 05 *	organic wastes containing hazardous substances
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\*: Evidence for disposal must be provided.

#### Remark:

Wastecode according to regulation EU 2014/955:

#### Waste code packaging

15 01 02	Plastic packaging
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### Waste treatment options

#### Appropriate disposal / Product:

Dispose of used product in its original packaging as special waste.

#### Appropriate disposal / Package:

Completely emptied packages can be recycled.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN number or ID number</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.2. UN proper shipping name</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.6. Special precautions for user</b>			
not relevant	not relevant	not relevant	not relevant

### 14.7. Maritime transport in bulk according to IMO instruments

No data available

## SECTION 15: Regulatory information

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

No data available

### 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1. Indication of changes

2.2.	Label elements
11.2.	Information on other hazards
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture

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## Betain Citrat

### 16.2. 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  
CAS Chemical Abstract Service  
CLP Classification, labelling and Packaging  
EC<sub>50</sub> Effective Concentration 50%  
EN European norm  
IATA International Air Transport Association  
IMDG-Code International Maritime Dangerous Goods Code  
LC<sub>50</sub> Lethal Concentration 50%  
LD<sub>50</sub> Lethal Dose 50%  
OECD Organization for Economic Cooperation and Development  
PBT persistent, bioaccumulative, toxic  
PNEC Predicted No Effect Concentration  
REACH Registration, Evaluation and Authorization of Chemicals  
RID Regulations concerning the international carriage of dangerous goods by rail  
SVHC Substance of Very High Concern  
UN United Nations  
VOC Volatile organic compounds  
vPvB very persistent, very bioaccumulative

### 16.3. Key literature references and sources for data

Security safety data sheet of the ingredients. Inventory of substances of the European Chemical Agency (ECHA).

### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	Calculation method.

### 16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H315	Causes skin irritation.
H319	Causes serious eye irritation.

### 16.6. Training advice

Persons charged with the handling and cleaning of the product must be trained prior to start their work and in regular intervals. They must be informed about the risks using the product and the measures to take for efficient prevention. This concerns particularly working security, first aid, health and environment protection.

### 16.7. Additional information

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 madeup material.

\* Data changed compared with the previous version.