

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Creapure® Citrate

Version 5.3 / REG\_EU  
Revision Date: 17.02.2020

Specification: 132507  
Material no.:

Date of first issue: 17.02.2020  
Print Date: 18.02.2020

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

#### 1.1 Product identifier

Trade name : Creapure® Citrate  
Registration number : if available listed in Chapter. 3

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

Use of the Sub-  
stance/Mixture : dietary supplement

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

Company : AlzChem Trostberg GmbH  
Dr.-Albert-Frank-Str. 32  
83308 Trostberg, Germany  
Telephone : +49 8621 86-3351  
E-mail address of person  
responsible for the SDS : alz-pst@alzchem.com

#### 1.4 Emergency telephone number

Emergency telephone num-  
ber : +49 8621 86-2776  
AlzChem Trostberg GmbH, Fire Brigade

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**  
Not a hazardous substance or mixture.

#### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**  
No labelling required

#### 2.3 Other hazards

A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out  
Observe product acidity.  
Dusts can form explosive mixtures with air.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Chemical nature : Creatine Citrate, content (HPLC, IC) > 99%  
reaction product of:

#### Components

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Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Creatine Monohydrate	6020-87-7 200-306-6 01-2119931462-43-0000	not classified	
Citric acid	77-92-9 201-069-1 01-2119457026-42-XXXX	Eye Irrit. 2; H319	

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Seek medical advice in case of symptoms caused by eye or skin contact, inhalation or swallowing.
- If inhaled : Move to fresh air.
- In case of skin contact : No particular measures required.
- In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.
- If swallowed : No hazards which require special first aid measures.

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

None known.

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

Treatment : Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Water spray, foam, CO<sub>2</sub>, dry powder.
- Unsuitable extinguishing media : high volume water jet

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

Specific hazards during fire-fighting : None known.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear personal protective equipment; see section 8.  
Ensure adequate ventilation.

#### 6.2 Environmental precautions

Environmental precautions : Product or extinguishing water with product must not be allowed to enter soil, sewers or natural bodies of water.

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

Methods for cleaning up : Use mechanical handling equipment.  
Avoid dust formation.  
Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For disposal considerations see section 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : Assure sufficient ventilation.  
Avoid dust formation.  
Do not allow accumulation of dust.

Advice on protection against fire and explosion : Avoid formation of air-dust mixtures and keep away from ignition sources (sparks, flames, open flame) to prevent dust explosions. Do not smoke. Take precautionary measures against static discharges.

Hygiene measures : Do not breathe dust. Take off clothing and shoes contaminated with product. Clean before reuse.

Dust explosion class : St1

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

Requirements for storage areas and containers : Keep tightly closed.

Advice on common storage : Protect against moisture.  
Incompatible with oxidizing agents.

Storage class (TRGS 510) : 13, Non Combustible Solids

Packaging material : Suitable material: polyethylene, Polypropylene

#### 7.3 Specific end use(s)

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Specific use(s) : We are unaware of any specific end uses which go beyond the data reported in Section 1.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Safety glasses

Hand protection

Remarks : not required under normal use

Skin and body protection : Long sleeved clothing

Respiratory protection : No personal respiratory protective equipment normally required.  
If dust / aerosols occurs:  
Dust protection mask in accordance with EN 149 FFP2

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : powder

Colour : colourless to slightly yellow

Odour : faint

pH : 3,2 (20 °C)  
Concentration: ca. 30 g/l

Melting point/range : ca. 140 °C Method: Directive 84/449/EEC, A.1

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Flammability (solid, gas) : not highly flammable

Burning number : Method: Combustibility test in accordance with VDI 2263  
BZ 1 - does not ignite.

Lower explosion limit / Lower flammability limit : 200000 mg/m<sup>3</sup>

Vapour pressure : < 0,01 hPa (25 °C)

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Solubility(ies) Water solubility	: 29 g/l (20 °C)
Partition coefficient: n- octanol/water	: log Pow: -3,17 (20 °C) GLP: yes (Creatine)  log Pow: -1,95 (20 °C) GLP: yes (Citric acid)
Auto-ignition temperature	: ca. 595 °C  > 360 °C  Ignition temperature for deposited dust  No burning at 360°C.  595 °C  Ignition temperature for swirling (airborne) dust
Explosive properties	: not applicable

### 9.2 Other information

Dust explosion class	: St1
Minimum ignition energy	: 100 - 300 mJ

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No hazardous reactions are known if properly handled and stored.

### 10.4 Conditions to avoid

Conditions to avoid : temperatures > 165 °C  
Avoid dust formation.  
Keep away from heat and sources of ignition.

### 10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases  
Strong oxidizing agents  
humid air and water

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### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat): > 2000 mg/kg  
Method: Directive 93/21/EWG (Acute Toxic Class Method)  
Remarks: Own test result.

##### Components:

##### **Creatine Monohydrate:**

Acute oral toxicity : LD50 (Rat): > 2000 mg/kg  
Method: OECD TG 423  
Assessment: Based on available data, the classification criteria are not met.  
Remarks: Own test result.

Acute dermal toxicity : LD50 (rat, male/female): > 2000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: Based on available data, the classification criteria are not met.  
Remarks: Own test result.

##### **Citric acid:**

Acute oral toxicity : LD50 (rat): 11700 mg/kg  
Remarks: IUCLID  
  
LD50 (Mouse): 5400 mg/kg  
Remarks: IUCLID

Acute dermal toxicity : LD50 (rat): > 2000 mg/kg  
Remarks: IUCLID

#### Skin corrosion/irritation

##### Product:

Species : Rat  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes  
Remarks : Own test result.

##### Components:

##### **Creatine Monohydrate:**

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Species : Rabbit  
Method : Directive 67/548/EEC, Annex V, B.4.  
Result : No skin irritation  
Remarks : Own test result.

### Citric acid:

Species : Rabbit  
Method : OECD Guide-line 404  
Result : Not irritating.  
Remarks : IUCLID

### Serious eye damage/eye irritation

#### Product:

Species : Rabbit  
Method : Directive 67/548/EEC, Annex V, B.5.  
Result : Mild eye irritation  
Remarks : Own test result.

#### Components:

##### **Creatine Monohydrate:**

Species : Rabbit  
Method : Guideline 92/69/EEC B.5  
Result : No eye irritation  
Remarks : Own test result.

##### **Citric acid:**

Assessment : Causes serious eye irritation.  
Remarks : IUCLID

### Respiratory or skin sensitisation

#### Product:

Test Type : Magnusson & Kligman  
Species : guinea pig  
Method : Directive 96/54/EC, B.6  
Result : not sensitizing  
Remarks : Own test result.

#### Components:

##### **Creatine Monohydrate:**

Test Type : Magnusson & Kligman  
Species : guinea pig  
Method : Directive 96/54/EC, B.6  
Result : not sensitizing  
Remarks : Own test result.

##### **Citric acid:**

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Remarks : no data available

### Germ cell mutagenicity

#### Product:

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

#### Components:

##### **Creatine Monohydrate:**

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test, Own study

##### **Citric acid:**

Germ cell mutagenicity- Assessment : The substance did not show mutagenic effects in the bacterial test or animal experiment., IUCLID

### Carcinogenicity

#### Components:

##### **Creatine Monohydrate:**

Carcinogenicity - Assessment : No evidence that cancer may be caused.

##### **Citric acid:**

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met., IUCLID

### Reproductive toxicity

#### Components:

##### **Creatine Monohydrate:**

Reproductive toxicity - Assessment : No indications of effects of reproductive / developmental toxicity.

##### **Citric acid:**

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met., IUCLID

### STOT - single exposure

#### Components:

##### **Creatine Monohydrate:**

Remarks : no data available



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### Citric acid:

Remarks : no data available

### STOT - repeated exposure

#### Components:

#### Creatine Monohydrate:

Remarks : no data available

### Citric acid:

Remarks : no data available

### Repeated dose toxicity

#### Components:

#### Creatine Monohydrate:

Species : Rat  
NOAEL : 2000 mg/kg  
Exposure time : 28-day  
Assessment : Based on available data, the classification criteria are not met.

### Aspiration toxicity

#### Components:

#### Creatine Monohydrate:

No data available

### Citric acid:

No data available

### Experience with human exposure

#### Components:

#### Creatine Monohydrate:

General Information : Creatine is found in muscular tissue and is produced by the liver and kidneys. No health effects have been reported in humans.

### Further information

#### Product:

Remarks : No additional toxicological data are available.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): > 100 mg/l  
Exposure time: 48 h  
Method: Directive 92/69/EEC C.2  
Remarks: Own test result.

#### Components:

##### **Creatine Monohydrate:**

Toxicity to fish : LC50 (Brachydanio rerio): > 100 mg/l  
Exposure time: 96 h  
Method: Directive 92/69/EEC, C.2  
Remarks: Own test result.

NOEC : > 100 mg/l  
Method: Directive 92/69/EEC, C.2  
Remarks: Own test result.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): > 1000 mg/l  
Exposure time: 48 h  
Method: Directive 92/69/EEC C.2  
Remarks: Own test result.

##### **Citric acid:**

Toxicity to fish : LC50 (Leuciscus idus melanotus): 440 mg/l  
Exposure time: 48 h  
Method: OECD 203  
Remarks: IUCLID

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1535 mg/l  
Exposure time: 24 h  
Remarks: IUCLID

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Remarks: readily biodegradable

#### Components:

##### **Creatine Monohydrate:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 96,6 %  
Exposure time: 28 d  
Remarks: Own study

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### Citric acid:

Biodegradability : Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD TG 301 B  
Remarks: Readily biodegradable  
IUCLID

Biochemical Oxygen Demand (BOD) : 526 mg/g

Chemical Oxygen Demand (COD) : 728 mg/g

### 12.3 Bioaccumulative potential

#### Components:

#### **Creatine Monohydrate:**

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: < -2 (20 °C)

#### **Citric acid:**

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).  
IUCLID

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

### 12.6 Other adverse effects

#### Product:

Additional ecological information : Prevent uncontrolled release in the environment.  
No further ecotoxicological data are available.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Must be brought to an adequate waste treatment facility, in conformity with applicable waste disposal regulations.

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Contaminated packaging : Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

### SECTION 14: Transport information

#### 14.1 UN number

Not regulated as a dangerous good

#### 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

Remarks : Not classified as dangerous in the meaning of transport regulations.

**ADR**  
Remarks : Not regulated as a dangerous good  
: Not classified as dangerous in the meaning of transport regulations.

**RID**  
Remarks : Not regulated as a dangerous good  
: Not classified as dangerous in the meaning of transport regulations.

**IMDG**  
Remarks : Not regulated as a dangerous good  
: Not classified as dangerous in the meaning of transport regulations.

**IATA (Cargo)**  
Remarks : Not regulated as a dangerous good  
: Not classified as dangerous in the meaning of transport regulations.

**IATA\_P (Passenger)** : Not regulated as a dangerous good

#### 14.5 Environmental hazards

Not regulated as a dangerous good

#### 14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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### SECTION 15: Regulatory information

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

#### 15.2 Chemical safety assessment

No substance safety assessment is required for this product because use of the substance is already regulated within the framework of specific legal regulations.

### SECTION 16: Other information

#### Full text of H-Statements

H319 : Causes serious eye irritation.

#### Full text of other abbreviations

Eye Irrit. : Eye irritation

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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### Further information

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.

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