

SAFETY DATA SHEET

Creapure®

Material no.	Version	3.3 / REG_US
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	Creapure®
CAS No.	6020-87-7
Company	AlzChem LLC 11390 Old Roswell Rd. Suite 124 Alpharetta, GA 30009 USA
Telephone	770 804-0371
Fax	770 804-0375
E-mail address	alz-pst@alzchem.com
Emergency telephone number	CHEMTREC: (800) 424-9300
Use of the Substance / Preparation	Dietary supplement

2. HAZARDS IDENTIFICATION

Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200)

OSHA Defined Hazard: Combustible Dust

GHS-Labeling

Statutory basis	OSHA Hazard Communication Standard (29 CFR 1910.1200)
Symbol(s)	None according to OSHA Hazard Communication Standard (29 CFR 1910.1200)
Signal word	Warning
Hazard statement	May form combustible dust concentrations in air.
Precautionary statement:	None according to OSHA Hazard Communication Standard (29 CFR 1910.1200)
Prevention	
Precautionary statement:	None according to OSHA Hazard Communication Standard (29 CFR 1910.1200)
Reaction	

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / hazardous components as per OSHA Hazard Communication Standard (29 CFR 1910.1200)

• Creatine Monohydrate	>= 99.0%
CAS-No. 6020-87-7	
OSHA Defined Hazard: Combustible Dust	May form combustible dust concentrations in air.

4. FIRST AID MEASURES

Description of first aid measures

General advice

II Seek medical advice in case of symptoms caused by eye or skin contact, inhalation or swallowing. II

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Inhalation

Move to fresh air.

Skin contact

No particular measures required.

Eye contact

II Rinse thoroughly with plenty of water, also under the eyelids.

II

Ingestion

No particular measures required.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray, Dry chemical, Carbon dioxide (CO₂), Foam

Unsuitable extinguishing media

High volume water jet

Special hazards arising from the substance or mixture

When burned, the substance may decompose into the following products of combustion:

- Carbon oxides
- Nitrous gases

Explosion: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Use personal protective equipment, see Chapter 8.

Ensure adequate ventilation.

Avoid dust formation.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Avoid dispersal of dust in the air (*i.e.*, clearing dust surfaces with compressed air).

Non-sparking tools should be used.

Environmental precautions

Prevent substance from entering soil, natural bodies of water and sewer systems.

Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

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7. HANDLING AND STORAGE

Handling

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Provide sufficient ventilation and exhaust at the workplace.

Keep in a dry, cool place.

Advice on protection against fire and explosion

Minimize dust generation and accumulation.

Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Dust explosion class

St1

Storage

Conditions for safe storage, including any incompatibilities

Keep tightly closed.

Suitable materials

polyethylene, polypropylene

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines

Name Particulates not otherwise regulated (PNOR)

CAS No. 6020-87-7

US OSHA Permissible Exposure Limits (PELs)

Form: Dust

Time Weighted Average (TWA): 15 mg/m³ (total dust)

Time Weighted Average (TWA): 5 mg/m³ (respirable fraction)

Control parameters

Engineering controls

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (*i.e.*, there is no leakage from the equipment).

Use only appropriately classified electrical equipment and powered industrial trucks.

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Personal protective equipment

Respiratory protection

If the occupational exposure limits cannot be met, in exceptional cases suitable respiratory equipment should be worn only for a short period of time.

Hand protection

Under normal conditions, not required

Eye protection

Safety glasses in case of dust being formed

Skin and body protection

No special protective equipment required

Hygiene measures

Do not breathe dust.

Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Powder
Color	Colorless to slightly yellow
Odor	Odorless
Physical state	Solid

Information on basic physical and chemical properties

pH	7.4 (14 g/l) (68 °F / 20 °C)
Melting point/range	ca. 554 °F (290 °C) decomposition
Flash point	Not applicable
Flammability	Does not ignite
Auto-ignition temperature	>1472°F (800°C) Ignition temperature for swirling (airborne) dust
Burning number	BZ 1 – does not ignite
Water solubility	14 g/l (68 °F / 20 °C)
Partition coefficient: n-octanol/water	log Pow: -2 (68 °F / 20 °C) Method: EEC method 92/69/EEC, A 8
Molecular weight	149.1 g/mol

Further information

Other information No further physicochemical data were determined.

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10. STABILITY AND REACTIVITY

Stability	No decomposition if stored and applied as directed.
Conditions to avoid	> 482 °F (> 250 °C)
Incompatible materials	Strong acids and strong bases, Strong oxidizing agents
Hazardous decomposition products	Ammonia

11. TOXICOLOGICAL INFORMATION

Product data below

Data for: Creatine Monohydrate

Acute oral toxicity	LD50 rat: > 2000 mg/kg Method: OECD TG 423 No negative effects. AlzChem test result.
Acute dermal toxicity	LD50 rat(male/female): > 2000 mg/kg Method: OECD Test Guideline 402 No negative effects. AlzChem test result.
Skin irritation	Rabbit No skin irritation Method: Directive 67/548/EEC, Annex V, B.4. AlzChem test result.
Eye irritation	Rabbit No eye irritation Method: Guideline 92/69/EEC B.5 AlzChem test result.
Sensitization	Magnusson & Kligman guinea pig: not sensitizing Method: Directive 96/54/EC, B.6 AlzChem test result.
Respiratory Sensitization	No data are available
Germ Cell Mutagenicity	Not mutagenic in AMES Test. AlzChem test result
Carcinogenicity	No evidence that cancer may be caused
Single Target Organ Toxicity – Single Exposure	No data are available
Single Target Organ Toxicity – Repeated Exposure	No data are available

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Reproductive Toxicity	No data are available
Effects on Lactation	No data are available
Human Experience	Creatine is found in muscular tissue and is produced by the liver and kidneys. No health effects have been reported in humans.
Further information	In a 28-day study in rats, no treatment related findings were noted. The NOAEL for this study was determined to be 2000 mg/kg b.w. No additional toxicological data are available.

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed)

NTP:

No component of this product is identified as a known or anticipated carcinogen by NTP.

IARC:

No component of this product present is identified as a confirmed, probable, or possible carcinogen by IARC.

OSHA:

No component of this product is identified as a carcinogen or a suspected carcinogen by OSHA.

12. ECOLOGICAL INFORMATION

Data in Section 12 is provided in accordance with EC CLP regulation 1272/2008 as this section is not mandatory under OSHA HazCom 2012 (29 CFR 1910.1200). Product data are summarized below.

Data for Creatine Monohydrate

Elimination information (persistence and degradability)

Biodegradability	Exposure time: 28 d Result: 96.6 % Readily biodegradable.
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Ecotoxicity effects

Toxicity to fish	LC50 <i>Brachydanio rerio</i> (Zebrafish): > 100 mg/l / 96 h Method: Directive 92/69/EEC, C.2 AlzChem test result.
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	NOEC : > 100 mg/l Method: Directive 92/69/EEC, C.2 AlzChem test result.
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Toxicity to bacteria	No data are available.
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Toxicity in aquatic invertebrates	EC50 <i>Daphnia magna</i> (Water flea): > 1000 mg/l / 48 h Method: Directive 92/69/EEC C.2
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Ecotoxicology Assessment

Chronic aquatic toxicity	No data are available.
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Further information on ecology

Further Information No further ecotoxicological data are available.

13. DISPOSAL CONSIDERATIONS

Product

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

Uncleaned packaging

Packaging, that cannot be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT):

This product is not classified as dangerous, per US DOT regulations.

Transport Canada

This product is not classified as dangerous, per Transport Canada regulations.

International Maritime Dangerous Good Code (IMDG):

This product is not classified as dangerous, per the International Maritime Organization (IMO).

Air transport ICAO-TI/IATA-DGR

This product is not classified as dangerous, per the International Civil Air Association / International Air Transport Association (IATA).

Transport / further information

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Chemical Inventory Status

Canada (DSL)	Listed/registered Listed as anhydrate
Korea (KECI)	Listed/registered Listed as anhydrate
Europe (EINECS/ELINCS)	Listed/registered Listed as anhydrate
Japan (ENCS)	Listed/registered Listed as anhydrate
USA (TSCA)	Listed/registered Listed as anhydrate
China (IECSC)	Listed/registered
New Zealand (NZIoC)	Listed/registered

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Australia (AICS) Listed/registered

Philippines (PICCS) Listed/registered

United States – Federal Regulations

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) – Reportable Quantity (RQ):

The components of this product are not CERCLA regulated.

Emergency Planning and Community Right-to-Know Act (EPCRA):

SARA Title III – Section 302 Components

The components of this product are not subject to the reporting requirements of SARA Title III, section 302.

SARA Title III – Section 304 Components

The components of this product are not subject to the reporting requirements of SARA Title III, section 304.

SARA Title III – Section 311/312 Hazards

The components of this product are not subject to the reporting requirements of SARA Title III, section 311/312

SARA Title III – Section 313 Components

The components of this product are not subject to the reporting requirements of SARA Title III, section 313.

Toxic Substances Control Act (TSCA):

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Inventory.

United States - State Regulations

California Prop 65

This product does not intentionally contain any chemical known to the State of California to cause cancer, birth defects, or any other reproductive defects.

Check your local jurisdiction for specific instructions.

16. OTHER INFORMATION

Further information

Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

This version was prepared on 1/9/2020. This version replaces all previous versions.

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 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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Legend

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADNR	European agreement concerning the international carriage of dangerous goods by inland waterways (ADN)
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration Factor
BetrSichV	German Ordinance on Industrial Safety and Health
c. c.	closed cup
CAS	Chemical Abstract Services
CESIO	European Committee of Organic Surfactants and their Intermediates
CFR	Code of Federal Regulations
ChemG	German Chemicals Act
CMR	Carcinogenic-Mutagenic-toxic for Reproduction
DIN	German Institute for Standardization
DNEL	Derived No Effect Level
EINECS	European Inventory of Existing Commercial Chemical Substances
GefStoffV	German Ordinance on Hazardous Substances
GGVSEB	German ordinance for road, rail and inland waterway transportation of dangerous goods
GGVSee	German ordinance for sea transportation of dangerous goods
GLP	Good Laboratory Practice.
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard (29 CFR 1910.1200) - HazCom 2012
IATA DGR	International Air Transport Association – Dangerous Goods Regulations
ICAO-TI	International Civil Aviation Organisation - Technical Instructions
IMDG Code	International Maritime Dangerous Goods Code
ISO	International Organization For Standardization
LOAEL	Lowest Observed Adverse Effect Level
LOEL	Lowest Observed Effect Level
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
NOS	(Hazard) Not Otherwise Specified
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, Toxic
PEC	Predicted Environmental Concentration
PNEC	Predicted No Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TA	Technical Instructions (German Ordinance)
TPR	Third Party Representative (Art. 4)
TRGS	Technical Rules for Hazardous Substances (German Regulations)
VCI	German "Verband der Chemischen Industrie e. V."
vPvB	Very Persistent, Very Bioaccumulative
VOC	Volatile Organic Compounds
VwVwS	German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
WGK	German Water Hazard Class
WHO	World Health Organization