1 Identification

Product identifier
Product name: Creatine, anhydrous
Stock number: A17477
CAS Number: 57-00-1
EC number: 200-306-6

Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com
Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.
Hazard(s) not otherwise classified No information known.

Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms

GHS07
Signal word Warning
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

Health (acute effects) = 1
Flammability = 1
Physical Hazard = 1

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description:
57-00-1 Creatine, anhydrous

Identification number(s):
EC number: 200-306-6

4 First-aid measures

Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
### 5 Fire-fighting measures

**Extinguishing media**
- Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**
- If this product is involved in a fire, the following can be released:
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides (NOx)

**Advice for firefighters**
- **Protective equipment:**
  - Wear self-contained respirator.
  - Wear fully protective impervious suit.

### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
- Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:**
- Do not allow material to be released to the environment without proper governmental permits.

**Methods and material for containment and cleaning up:**
- Ensure adequate ventilation.

**Prevention of secondary hazards:**
- No special measures required.

**Reference to other sections**
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

### 7 Handling and storage

**Handling**
- **Precautions for safe handling**
  - Keep container tightly sealed.
  - Store in cool, dry place in tightly closed containers.
  - Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**
- No information known.

**Conditions for safe storage, including any incompatibilities**
- **Storage**
  - **Requirements to be met by storerooms and receptacles:**
    - No special requirements.
  - **Information about storage in one common storage facility:**
    - Store away from oxidizing agents.

**Further information about storage conditions:**
- Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)**
  - No further relevant information available.

### 8 Exposure controls/personal protection

**Additional information about design of technical systems:**
- Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Control parameters**
- **Components with limit values that require monitoring at the workplace:**
  - Not required.

**Additional information:**
- No data

**Exposure controls**
- **Personal protective equipment**
  - **General protective and hygienic measures**
    - The usual precautionary measures for handling chemicals should be followed.
    - Keep away from foodstuffs, beverages and feed.
    - Remove all soiled and contaminated clothing immediately.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes and skin.
    - Maintain an ergonomically appropriate working environment.
  - **Breathing equipment:**
    - Use suitable respirator when high concentrations are present.
  - **Eye protection:**
    - Safety glasses
  - **Body protection:**
    - Protective work clothing.

### 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**
- **Appearance:**
  - Form: Powder
  - Color: White
  - Odor: Not determined
  - Odor threshold: Not determined
- **pH-value:** Not applicable.

**Change in condition**
- **Melting point/Melting range:**
  - Not determined
- **Boiling point/Boiling range:**
  - Not determined
- **Sublimation temperature / start:**
  - Not determined

**Flash point:**
- Not applicable

**Flammability (solid, gaseous):**
- Not determined.

**Ignition temperature:**
- Not determined.
Decomposition temperature: Not determined.
Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.
Explosion limits:
  Lower: Not determined
  Upper: Not determined
Vapor pressure: Not applicable.
Density at 20 °C (68 °F): 1.33 g/cm³ (11.099 lbs/gal)
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with Water: Soluble
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
  dynamic: Not applicable.
  kinematic: Not applicable.
Other information: No further relevant information available.

10 Stability and reactivity
Reactivity: No information known.
Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: Oxidizing agents
Hazardous decomposition products:
  Carbon monoxide and carbon dioxide
  Nitrogen oxides

11 Toxicological information
Information on toxicological effects
  Acute toxicity: No effects known.
  LD/LC50 values that are relevant for classification: No data
  Skin irritation or corrosion: Causes skin irritation.
  Eye irritation or corrosion: Causes serious eye irritation.
  Sensitization: No sensitizing effects known.
  Germ cell mutagenicity: No effects known.
  Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
  Reproductive toxicity: No effects known.
  Specific target organ system toxicity - repeated exposure: No effects known.
  Specific target organ system toxicity - single exposure: May cause respiratory irritation.
  Aspiration hazard: No effects known.
  Subacute to chronic toxicity: No effects known.
  Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information
Toxicity:
  Aquatic toxicity: No further relevant information available.
  Persistence and degradability: No further relevant information available.
  Bioaccumulative potential: No further relevant information available.
  Mobility in soil: No further relevant information available.
Additional ecological information:
  General notes:
    Do not allow material to be released to the environment without proper governmental permits.
    Do not allow undiluted product or large quantities to reach ground water, watercourse or sewage system.
    Avoid transfer into the environment.
  Results of PBT and vPvB assessment
    PBT: Not applicable.
    vPvB: Not applicable.
  Other adverse effects: No further relevant information available.

13 Disposal considerations
Waste treatment methods
  Recommendation: Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
  Recommendation: Disposal must be made according to official regulations.
  Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information
Not a hazardous material for transportation.
UN-Number
  DOT, IMDG, IATA: None
UN proper shipping name
  DOT, IMDG, IATA: None
Transport hazard class(es)
  DOT, ADR, IMDG, IATA: None
  Class: None
Packaging group
  DOT, IMDG, IATA: None
Environmental hazards:
  Not applicable.
Special precautions for user:
  Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

DOT: Marine Pollutant (DOT):
Not dangerous according to the above specifications.

### 15 Regulatory information

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

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

**Hazard pictograms**

<table>
<thead>
<tr>
<th>GHS07</th>
</tr>
</thead>
</table>

**Signal word** Warning

**Hazard statements**

- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

**Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- 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.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations**

- All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
- All components of this product are listed on the Canadian Domestic Substances List (DSL).
- SARA Section 313 (specific toxic chemical listings) Substance is not listed.

**California Proposition 65**

- Prop 65 - Chemicals known to cause cancer Substance is not listed.
- Prop 65 - Developmental toxicity Substance is not listed.
- Prop 65 - Developmental toxicity, female Substance is not listed.
- Prop 65 - Developmental toxicity, male Substance is not listed.

**Information about limitation of use:** For use only by technically qualified individuals.

**Other regulations, limitations and prohibitive regulations**

- Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
- The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
- Substance is not listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Date of preparation / last revision:** 11/23/2015 / -

**Abbreviations and acronyms:**

- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- NTP: National Toxicology Program (USA)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)