1 Identification

Product identifier

Product name: Potassium, chunks, in mineral oil

Stock number: L13267
CAS Number: 7440-09-7
EC number: 231-119-8
Index number: 019-001-00-2

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)

GHS02 Flame
Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.

GHS05 Corrosion
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

Hazards 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)

Signal word Danger

Hazard statements
H260 In contact with water releases flammable gases which may ignite spontaneously.
H314 Causes severe skin burns and eye damage.

Precautionary statements
P231+P232 Handle under inert gas. Protect from moisture.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 If on skin (or hair). Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

B: Reactive flammable material
D: Toxic material causing other toxic effects
E: Corrosive material

Classification system

HMIS ratings (scale 0-4)

Health (acute effects) = 3
Flammability = 3
Physical Hazard = 3

Other hazards

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

3 Composition/information on ingredients

Chemical characterization: Substances

CAS® Description: 7440-09-7 Potassium

Identification number(s):

EC number: 231-119-8
Index number: 019-001-00-2

(Contd. on page 2)
4 First-aid measures

**Description of first aid measures**

**General information** Immediately remove any clothing soiled by the product.

**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.
Seek immediate medical advice.

**After eye contact**
Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing**
Seek medical treatment.

**Information for doctor**

Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

**Extinguishing media**
Suitable extinguishing agents Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents Water

**Special hazards arising from the substance or mixture**
Reacts violently with water
If this product is involved in a fire, the following can be released:

Potassium oxide

**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.
Ensure adequate ventilation
Keep away from ignition sources

**Environmental precautions:**
Do not allow product to reach sewage system or any water course.

**Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

**Prevention of secondary hazards:**
Keep away from ignition sources.

**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**
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

Reacts violently with water

**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 air.
Store away from water/moisture.
Store away from oxidizing agents.

Further information about storage conditions:
Store under dry inert gas.
This product is moisture sensitive.
This product is air sensitive.
Protect from humidity and water.
Keep container tightly sealed.
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:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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.

(Contd. on page 3)
Recommended filter device for short term use:
Use a respirator with organic vapor/acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.
Penetration time of glove material (in minutes) Not determined

Eye protection:
Tightly sealed goggles
Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Solid in mineral oil
Color: Silvery-white
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: 63-64 °C (145-147 °F)
Boiling point/Boiling range: 765-770 °C (1409-1418 °F)
Sublimation temperature / start: Not determined
Flammability (solid, gaseous) Contact with water liberates extremely flammable gases.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure: Not applicable.
Density at 20 °C (68 °F): 0.86 g/cm³ (7.177 lbs/gal)
Relative density Not determined.
Vapor density Not applicable.
Evaporation rate Not applicable.
Solubility in / Miscibility with Water: Reacts violently Contact with water releases flammable gases
Viscosity: dynamic: Not applicable.
kinematic: Not applicable.

Other information No further relevant information available.

10 Stability and reactivity

Reactivity
Reacts violently with water.
In contact with water releases flammable gases which may ignite spontaneously.
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
Reacts with strong oxidizing agents
Contact with water releases flammable gases
Reacts violently with water

Conditions to avoid No further relevant information available.
Incompatible materials:
Air
Oxidizing agents
Water/moisture

Hazardous decomposition products: Potassium oxide

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: Causes severe skin burns.
Eye irritation or corrosion: Causes serious eye damage.
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: No effects known.
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.
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.

14 Transport information

<table>
<thead>
<tr>
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Transport hazard class(es)

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<td>4.1</td>
<td>Flammable solids, self-reactive substances and solid desensitised explosives.</td>
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<td></td>
<td>4.3</td>
<td>Substances which, in contact with water, emit flammable gases</td>
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Packing group

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Environmental hazards: Not applicable.

Special precautions for user

Warning: Substances which, in contact with water, emit flammable gases
EMS Number: F-G,S-N

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:

DOT Marine Pollutant (DOT): No

UN "Model Regulation": UN2257, Potassium, 4.3, I

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

Signal word Danger

Hazard statements

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H314 Causes severe skin burns and eye damage.

Precautionary statements

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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.

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.
**Product name:** Potassium, chunks, in mineral oil

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**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.

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**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** 11/24/2015 / -

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses per Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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)

HMS: 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)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)