

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 02/08/2007

1 Identification of substance:

Product details:

Product name: Calcium granules

Stock number: 41653

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
 Johnson Matthey Catalog Company, Inc.
 30 Bond Street
 Ward Hill, MA 01835-8099
 Emergency Phone: (978) 521-6300
 CHEMTREC: (800) 424-9300
 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.
 After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Calcium (CAS# 7440-70-2): 100%

Identification number(s):

EINECS Number: 213-179-5

EU Number: 020-001-00-X

3 Hazards identification

Hazard description:



F Highly flammable

Information pertaining to particular dangers for man and environment

R 15 Contact with water liberates extremely flammable gases.

Classification system

NFPA Ratings (scale 0-4)



Health = 0

Fire = 0

Reactivity = 2

The substance demonstrates unusual reactivity with water.

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	3
REACTIVITY	2

Health (acute effects) = 1

Flammability = 3

Reactivity = 2

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4 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.

Seek immediate medical advice.

After eye contact

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

After swallowing Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents Extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents Water

Special hazards caused by the material, its products of combustion or resulting gases:

Contact with water releases hydrogen (explosive).

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Keep away from ignition sources.

Additional information:

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**Information for safe handling:**

Handle under dry argon.

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:

Keep ignition sources away.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

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Information about storage in one common storage facility:

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from air.

Do not store together with alkalies (caustic solutions).

Further information about storage conditions:

Store under dry inert gas.

Protect from humidity and water.

Keep container tightly sealed.

Avoid contact with air/oxygen.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and 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.

Components with limit values that require monitoring at the workplace:

Not required.

Additional information: No data**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.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves**Eye protection:**

Safety glasses

Full face protection

Body protection: Protective work clothing.**9 Physical and chemical properties:****General Information**

Form:	Granules
Color:	Silver-colored
Odor:	Odorless

Change in condition

Melting point/Melting range:	845°C (1553°F)
Boiling point/Boiling range:	1420°C (2588°F)
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
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Flammability (solid, gaseous)	Contact with water liberates extremely flammable gases.
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68°F):	1.55 g/cm ³
Solubility in / Miscibility with Water:	Contact with water releases flammable gases

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Water/moisture
 Acids
 Oxidizing agents
 Air
 Halogens
 Interhalogens
 Bases

Dangerous reactions

Contact with water releases flammable gases
 Reacts with oxidizing agents

Dangerous products of decomposition:

Hydrogen
 Metal oxide fume

11 Toxicological information**Acute toxicity:****Primary irritant effect:**

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

The toxicity of calcium compounds is generally due to the anion.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

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

DOT regulations:



Hazard class: 4.3
Identification number: UN1401
Packing group: II
Proper shipping name (technical name): CALCIUM
Label: 4.3

Land transport ADR/RID (cross-border)



ADR/RID class: 4.3 (W2) Substances which, in contact with water, emit flammable gases
Danger code (Kemler): 423
UN-Number: 1401
Packaging group: II
Description of goods: 1401 CALCIUM

Maritime transport IMDG:



IMDG Class: 4.3
UN Number: 1401
Label: 4.3
Packaging group: II
Proper shipping name: CALCIUM

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 4.3

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UN/ID Number:	1401
Label	4.3
Packaging group:	II
Proper shipping name:	CALCIUM

15 Regulations**Product related hazard informations:****Hazard symbols:**

F Highly flammable

Risk phrases:

15 Contact with water liberates extremely flammable gases.

Safety phrases:

8 Keep container dry.

24/25 Avoid contact with skin and eyes.

43 In case of fire, use powdered extinguishing agent. Never use water.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use:

For use only by technically qualified individuals.

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 MSDS: Health, Safety and Environmental Department.**Contact:** Darrell R. Sanders