

Calcium Silicon Alloy		Pricing >
Linear Formula	Ca-Si	
Pubchem CID	6336872, 76518750	
MDL Number	N/A	
EC No.	234-587-1	
IUPAC Name	calcium; silicon	
SMILES	[Si].[Ca]	
Inchl Identifier	InChI=1S/Ca.Si	
Inchl Key	OSMSIOKMMFKNIL-UHFFFAOYSA-N	
Signal Word	Warning	
Hazard Statements	H228	
Hazard Codes	F	
Precautionary Statements	P210-P240-P241-P280-P370+P378	
Risk Codes	N/A	
Safety Statements	N/A	
RTECS Number	VW0400000	
Transport Information	UN3178 4.1/PG II	

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SAFETY DATA SHEET

Date Accessed: 05/06/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #12013-55-7

Relevant identified uses of the substance:

Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:

Domestic, North America +1 800-424-9300

International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910
(OSHA HCS)

Flammable solids (Category 2), H228

Pictogram



Signal word

Warning

Hazard statement(s)

H228

Flammable solid.

Precautionary statement(s)

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240

Ground/bond container and receiving equipment.

P241

Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P370 + P378

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Hazards not otherwise classified (HNOC) or not covered by GHS-none

SECTION 3. COMPOSITION/INFORMATION

ON INGREDIENTS

Substances

CAS No. / Substance Name:

7440-21-3 Silicon

Identification number(s):

EC number: 231-130-8

7440-70-2 Calcium

Identification number(s):

EC number: 231-179-5

Index number: 020-001-00-X

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
silicon oxides

calcium oxides
Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Further information
Use water spray to cool unopened containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13)
Reference to other sections
For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.
Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-

ventilated place.

Over time, pressure may increase causing containers to burst. Moisture sensitive. Store under nitrogen.

Keep in a dry place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166

Use equipment for eye protection

on tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form: Solid in various forms (pieces, sputtering target)

Odor

odourless

Odor Threshold

no data available

pH

no data available

Melting point/freezing point

Melting point/range: no data available

Initial boiling point and boiling range

no data available

Flash point

no data available

Evaporation rate

no data available

Flammability (solid, gas)

The substance or mixture is a flammable solid with the category 2.

Upper/lower flammability or explosive limits

no data available

Vapor pressure

no data available

Vapor density

no data available

Relative density

no data available

Partition coefficient: n-octanol/water

no data available

Auto-ignition temperature

no data available

Decomposition temperature

no data available

Viscosity

no data available

Explosive properties

no data available

Oxidizing properties

no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid
Heat, flames and sparks. Extremes of temperature
and direct sunlight. Moisture.
Incompatible materials
Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Respiratory or skin sensitisation
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
IARC:
No component of this product present at levels
greater than or equal to 0.1% is identified as probable,
possible or confirmed human carcinogen by IARC.
ACGIH:
No component of this product present at levels
greater than or equal to 0.1% is identified as a
carcinogen or potential carcinogen by ACGIH.
NTP:
No component of this product present at levels
greater than or equal to 0.1% is identified as a known
or anticipated carcinogen by NTP.
OSHA:
No component of this product present at levels
greater than or equal to 0.1% is identified as a
carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
no data available
no data available
Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available
Additional Information
RTECS: VW0400000
To the best of our knowledge, the chemical, physical,
and toxicological properties have not been thoroughly
investigated.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available
Bioaccumulative potential
no data available
Mobility in soil
no data available
Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical
safety assessment not required/not conducted
Other adverse effects
no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Burn in a chemical incinerator equipped with an
afterburner and scrubber but exert extra care in
igniting as this material is highly flammable. Offer
surplus and non-recyclable solutions to a licensed
disposal company.
Contaminated packaging
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT regulations:
Hazard class: 4.1
Identification number: UN3178
Packing group: II
Proper shipping name (technical name):
FLAMMABLE SOLID, INORGANIC, N.O.S. (Calcium
Silicon)
Label 4.1
Land transport ADR/RID (cross-border)
ADR/RID class: 4.1 (F3) Flammable solids, self-
reactive substances and solid desensitised explosives
Danger code (Kemler): 40
UN-Number: 3178
Packaging group: II
UN proper shipping name: 3178 FLAMMABLE
SOLID, INORGANIC, N.O.S. (Calcium Silicon)
Maritime transport IMDG:
IMDG Class: 4.1
UN Number: 3178
Label 4.1
Packaging group: II
Marine pollutant: No
Proper shipping name: FLAMMABLE SOLID,
INORGANIC, N.O.S. (Calcium Silicon)

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 4.1
UN/ID Number: 3178
Label 4.1
Packaging group: II
Proper shipping name: FLAMMABLE SOLID,
INORGANIC, N.O.S. (Calcium Silicon)
UN "Model Regulation": UN3178, FLAMMABLE
SOLID, INORGANIC, N.O.S., 4.1, II
Special precautions for user
Warning: Flammable solids, self-reactive substances
and solid desensitised explosives
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code N/A

SECTION 15. REGULATORY INFORMATION

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

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
