

Material Safety Data Sheet

SILICON

Carolina Biological Supply Company

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Revised 11/1/99

Replaces (None)

Printed 9/01

1. Product Description

Product Name: Silicon
Product Code (s): Various
Size: Lump
Chemical Name: Silicon
CAS Number: 7440-21-3
Formula: Si
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215
Chemical Emergency Information:
800-227-1150 (8am-5pm [ET] M-F)
Chemtrec (Transportation Spill Response 24 hours):
800-424-9300

2. Composition/Information on Ingredients

Principal Hazardous Components: Silicon

TLV and PEL units:

ACGIH: 10 mg/m³ TWA

OSHA-PEL: 15 mg/m³ TWA

3. Hazardous Identification

Emergency Overview: May irritate eyes and skin. Avoid generating dust.

4. First Aid Measures

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.

Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - If swallowed, if conscious, give plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

5. Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating: Health: 0

Fire: 1

Reactivity: 0

Extinguisher Media: Use dry chemical, CO₂ or appropriate foam.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus

Unusual Fire and Explosion Hazards: Material, in powder form, is capable of creating a dust explosion

6. Spill or Leak Procedures

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

7. Special Precautions

Precautions to be Taken in Handling or Storing: Avoid creating dust. Keep away from sources of ignition. Store in an area suitable for chemical storage.

Other Precautions: Store flammables separately

8. Special Protection Information

Respiratory Protection (Specify Type): A MIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded

Ventilation: Local Exhaust: Acceptable

Mechanical (General): Yes

Special: No

Other: No

Protective Gloves: Rubber, neoprene, PVC, or equivalent

Eye Protection: Splash proof chemical safety goggles should be worn at all times

Other Protective Clothing or Equipment: Lab coat, eye wash, and safety shower

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SILICON (cont.)

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9. Physical Data

Molecular Weight: 28.09

Melting Point: 2570 °F

Boiling Point: 4271 °F

Vapor Pressure: N/A

Vapor Density (Air-1): N/A

Specific Gravity (H₂O=1): 2.33

Percent Volatile by Volume: N/A

Evaporation Rate (Ether=1): N/A

Solubility in Water: Insoluble

Appearance and Odor: Dark grey, odorless solid

10. Reactivity Data

Stability: Stable

Conditions to Avoid: None Known

Incompatibility (Materials to Avoid): None known

Hazardous Decomposition Products: None known

Hazardous Polymerization: Will not occur

11. Toxicity Data

Toxicity Data: orl-rat LD₅₀: 3160 mg/kg

Effects of Overexposure:

Acute: See section 3

Chronic: Silicon is toxic to the lungs and other mucous membranes

Conditions Aggravated by Overexposure: None known

Target Organs: Lungs

Primary Route(s) of Entry: Ingestion, inhalation

12. Ecological Data

EPA Waste Numbers: N/A

13. Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable federal, state and local regulations

Always contact a permitted waste disposer (TSD) to assure compliance

14. Transport Information

Not regulated in lump form

15. Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

SARA Sec. 313

Product or Components	SARA EHS	Chemicals	CERCLA RCRA		
	Sec. 302 TPQ	Name List	Chemical Category	Sec. 103 RQ lbs.	Sec. 261.33
Silicon	No	No	No	No	No

16. Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH American Conference of Governmental Industrial Hygienists

CAS Number Chemical Services Abstract Number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

DOT U.S. Department of Transportation

IARC International Agency of Research on Cancer

N/A Not Available

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

ppm parts per million

RCRA Resource Conservation and Recovery Act

SARA Superfund Amendments and Reauthorization Act

TLV Threshold Limit Value

TSCA Toxic Substances Control Act