

# Safety Data Sheet

Silicon

**CAROLINA**<sup>®</sup>  
www.carolina.com

## Section 1 Product Description

**Product Name:** Silicon  
**Recommended Use:** Science education applications  
**Synonyms:** Silicium  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

## Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

### WARNING

Causes eye irritation.

**GHS Classification:**  
Serious Eye Damage/Eye Irritation Category 2B

## Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Silicon	7440-21-3	100

## Section 4 First Aid Measures

### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

## Section 5 Firefighting Procedures

**Extinguishing Media:** Use dry chemical, CO2 or appropriate foam.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Avoid Dusting. May become explosive when dispersed in air.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

## Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. No special spill clean-up considerations. Collect and discard in regular trash.

## Section 7 Handling and Storage

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**Handling:** Wash thoroughly after handling.  
**Storage:** Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Silicon	N/A	N/A	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	N/A

### Control Parameters

**Engineering Measures:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use.

**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** No information available

## Section 9 Physical Data

<b>Formula:</b> Si	<b>Vapor Pressure:</b> 1 Pa at 1635 deg C
<b>Molecular Weight:</b> 28.09	<b>Evaporation Rate (BuAc=1):</b> No data available
<b>Appearance:</b> Grey Solid	<b>Vapor Density (Air=1):</b> No data available
<b>Odor:</b> None	<b>Specific Gravity:</b> 2.33
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Practically Insoluble
<b>pH:</b> No data available	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> 1410 C	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> 2355 C	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> No data available	<b>Percent Volatile by Volume:</b> N/A

## Section 10 Reactivity Data

<b>Reactivity:</b>	Not generally reactive under normal conditions.
<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	None known.
<b>Incompatible Materials:</b>	Strong oxidizing agents, Alkali Carbonates, Chlorine, Fluorine, Calcium
<b>Hazardous Decomposition Products:</b>	Toxic gases
<b>Hazardous Polymerization:</b>	Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Respiratory Irritation, Hypertension  
**Delayed Effects:** No data available

Acute Toxicity: Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
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Silicon 7440-21-3 Oral LD50 Rat 3160 mg/kg Not determined Not determined

## Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Silicon	7440-21-3	Not listed	Not listed	Not listed

## Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No data available  
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** Chemically Transformed  
**Bioaccumulation:** No data  
**Degradability:** Naturally occurring element. Does not biodegrade.  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Silicon	7440-21-3	

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:** Not regulated for transport by US DOT.  
**Air - IATA Proper Shipping Name:** Not regulated for air transport by IATA.

## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Silicon	7440-21-3	No	No	No	No	No

## Section 16 Additional Information

**Revised:** 09/09/2015 **Replaces:** 09/03/2014 **Printed:** 10-29-2015

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.

## Glossary

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ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health