

Safety Data Sheet
Silicon Metal



SECTION 1: IDENTIFICATION

Product Name: Silicon Metal

CAS No.: 7440-21-3

Chemical Formula: Si

Other Names: Silicon, Si, Metallic Silicon

Intended Use / Restrictions on Use:

For professional/industrial use only.

Contact Information:

Greenwich Metals, Inc.

165 West Putnam Ave.

Greenwich, CT 06830

Phone: 203-622-4848

Emergency Contact:

Chemtrec – call 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification:

This substance is not classified as hazardous to health or the environment.

Label Elements:

Hazard Pictograms: N/A

Signal Word: N/A

Hazard Statements: N/A

Precautionary Statements: N/A

Other Hazards:

Silicon-dust suspended in air may cause dust explosions under certain conditions. Reference section 10.

Unknown Acute Toxicity Statement:

Not Applicable

SECTION 3: COMPOSITION

Name: Silicon

Synonyms: Silicon Metal, Si, Metallic Silicon

Chemical Name	CAS Number	% by Weight
Silicon (Si)	7440-21-3	98.50% Minimum

Mixture:

Not applicable

SECTION 4: FIRST AID MEASURES

Required Treatment:

After inhalation, move to fresh air and rest in a position comfortable for breathing.

After skin contact, wash skin thoroughly.

After eye contact, remove contact lenses if applicable and flush eyes with water for at least 15 minutes.

After ingestion, do not induce vomiting. Rinse mouth with water. Call poison control center or doctor.

Important Symptoms & Effects, Acute & Delayed:

No information available. If feeling un-well after exposure, consult with a doctor.

Indication of Medical Attention:

If any acute or chronic symptoms arise or if feeling unwell after exposure, seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES**Extinguishing Techniques/Equipment:**

Use extinguishing media appropriate for surrounding environment. Dry sand, CO₂ or dry powder.

Chemical Hazards from Fire:

May form silicon oxides. Dust of silicon can be ignited and will propagate flame.

Special Equipment and Precautions for Firefighters:

Exercise caution. If entering fire area, wear proper protective equipment including respiratory protection if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Emergency Procedures/Personal Protection:**

Avoid all contact with skin, eyes, or clothing. Avoid breathing fumes and dust.

Protective Equipment:

Use appropriate personal protection equipment (PPE), as listed in section 8.

Methods of Containment & Cleanup:

Sweep up and shovel without creating dust. Keep in closed containers for disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling:**

When solid, practice good industrial hygiene and safety procedures. Do not allow dust or powder to accumulate on equipment or building surfaces. Clean exposed areas.

Precautions for Safe Storage:

Store in cool, dry and well ventilated location. Seal containers. Keep away from incompatible materials such as strong oxidizing agents, alkali carbonates, calcium, cobalt difluoride, manganese trifluoride.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**Control Parameters:**

USA OSHA - OSHA TWA (mg/m³) – 15mg/m³ – Table Z-1 Limits for Air Contaminants

Engineering Controls:

Ensure adequate ventilation. Emergency eye wash stations and safety showers should be nearby any potential exposure. Ensure national/local regulations are observed. Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment:

Protective goggles, gloves and clothing. If insufficient ventilation, wear respiratory protection.

Materials for Protective Clothing: Wear chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant gloves. If working with molten or hot material, wear thermally resistant gloves.

Eye Protection: Chemical goggles or safety glasses should be worn at all times. For furnace work, wear a face shield or safety glasses.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Thermal Hazard Protection: For furnace work, fire retardant clothing, gloves, and safety shoes should be worn.

Consumer Exposure Controls: Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid (Metal)

Color: Grey

Taste: N/A

Molecular Weight: 28.09 g/mol

Odor: N/A

Odor Threshold: N/A

pH: N/A

Melting Point: 1410 °C (2570 °F)

Boiling Point: 2355 °C (4271 °F)

Boiling Range: N/A

Flash Point: N/A

Evaporation Rate: N/A

Flammability: N/A

Upper/Lower Flammability Limits: N/A

Vapor Pressure: N/A

Vapor Density: N/A

Relative Density: 2.33 g/mL at 25 °C

Solubility: Insoluble in water

Partition Coefficient: N/A

Auto-ignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

SECTION 10: STABILITY AND REACTIVITY

Reactivity: N/A

Stability: Stable under proper handling and storage conditions.

Hazardous Reactions: Do not react with hydrofluoric acid or nitric acid.

Conditions to Avoid: Avoid adding wet material to molten silicon as it may cause explosions.

Incompatible Materials: Strong oxidizing agents, alkali carbonates, calcium, cobalt difluoride, manganese trifluoride.

Hazardous Decomposition Products: Reaction with hydrofluoric acid and nitric acid can lead to the formation of toxic silicon gases or nitrogen gases.

SECTION 11: TOXICOLOGICAL INFORMATION**Routes of Exposure**

Inhalation of dust, fumes. Skin contact through physical contact. Eye contact through physical contact or dust and fumes. Ingestion through contamination of skin/surfaces.

Chronic and Acute Related Symptoms/Effects:

Inhalation of fumes or dust can cause respiratory irritation. Skin contact with molten metal can cause burns. Dust or fumes can cause eye irritation.

Measures of Toxicology:

Acute Toxicity: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/ Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Reproductive Toxicity: Not Classified

Carcinogenic Information: IARC Group: 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.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects:

Prevent entry to sewers and public waterways. Avoid release to the environment. Ensure accordance with national and local regulations.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOT (US) – Not a Dangerous Good

SECTION 15: REGULATORY INFORMATION

US Federal Regulations:

SARA Section 302 – None

SARA Section 311/312 – No SARA Hazards

SARA Section 313 Emissions Reporting – Does not contain any chemical that exceed established thresholds.

US State Regulations:

California – Prop. 65 – Non-carcinogenic

Massachusetts – Right To Know List

Pennsylvania – Right To Know List

New Jersey – Right To Know List

SECTION 16: OTHER INFORMATION

Date of Preparation: 05/31/15

Prepared in accordance with OSHA HCS 29 CFR 1910.1200.

Greenwich Metals, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. GREENWICH METALS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY,

FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, GREENWICH METALS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.