

SUPPLIER



MATERIAL SAFETY DATA SHEET

GENERATED 03/15/2011, **REVISION** 01/03/2011, **SUPERCEDES REVISION** 07/08/2009,
DATE CREATED 02/23/1990

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Silicon

PRODUCT CODE: S-MSDS0036

PRODUCT NAME: Silicon

REFERENCE #: 7440-21-3

MANUFACTURER INFORMATION

COMPANY NAME: Materion Advanced Chemicals Inc.
 1316 W. St. Paul Avenue
 Milwaukee, WI 53233

EMERGENCY CONTACT: CHEMTREC (800)424-9300

ALTERNATE EMERGENCY CONTACT: Materion Advanced Chemicals Inc. (414)289-9800

CHEMICAL FAMILY: Non-metal

CAS NUMBER: 7440-21-3

RTECS #: VW0400000

UPC/EAN: 231-130-8

SYNONYMS

Silicon

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Silicon

Hazardous Components (Chemical Name)	CAS# / EC#	Concentration	OSHA PEL	ACGIH TLV
Silicon	7440-21-3 NA	100.0 %		

SECTION 3. HAZARDS IDENTIFICATION

Silicon

EMERGENCY OVERVIEW

ROUTE(S) OF ENTRY: Inhalation? No , Skin? No , Eyes? No , Ingestion? No Other: N

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

To the best of our knowledge the chemical, physical and toxicological properties of silicon have not been thoroughly investigated and recorded.

INHALATION:

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

INGESTION:

Acute: No acute health effects recorded.

Chronic: No chronic health effects recorded.

SKIN:

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

EYE:

Acute: Dust and powder may cause abrasive irritation.

Chronic: No chronic health effects recorded.

TARGET ORGANS: No target organs recorded.

RECOMMENDED EXPOSURE LIMITS

See "Section II"

LD 50 / LC 50

See "Carcinogenicity/Other Information"

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: May cause a red, dry, throat and coughing.

INGESTION: No acute or chronic health effects recorded.

SKIN: May cause redness and scratches.

EYE: May cause red, itching and watering.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Pre-existing respiratory disorders.

SECTION 4. FIRST AID MEASURES

Silicon

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air.

INGESTION: Not applicable.

SKIN: Wash area with mild soap and water.

EYE: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if irritation persists.

SECTION 5. FIRE FIGHTING MEASURES

Silicon

FLASH PT:

N.A.

EXPLOSIVE LIMITS:

LEL: NA
NA

UEL:

AUTOIGNITION PT:

FIRE FIGHTING INSTRUCTIONS

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

FLAMMABLE PROPERTIES AND HAZARDS

Elemental silicon is flammable when exposed to flame or by chemical reaction with oxidizing agents. May have a violent reaction with alkali carbonates; oxidants; (Al+PbO); Ca; CsC₂; CoF₂; F₂; IF₅; MnF₃; Rb₂C₂; FNO; AgF; and NaK alloy.

When heated it will react with water or steam to produce hydrogen gas.

HAZARDOUS COMBUSTION PRODUCTS

EXTINGUISHING MEDIA

USE: Not applicable. Use suitable extinguishing agent for surrounding materials and type of fire.

UNSUITABLE EXTINGUISHING MEDIA

SECTION 6. ACCIDENTAL RELEASE MEASURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Wear appropriate respiratory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

SECTION 7. HANDLING AND STORAGE

Silicon

HAZARD LABEL INFORMATION:

Store in cool, dry area Store in tightly sealed container Wash thoroughly after handling

PRECAUTIONS TO BE TAKEN IN HANDLING

None

PRECAUTIONS TO BE TAKEN IN STORING

None

OTHER PRECAUTIONS

None

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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PROTECTIVE EQUIPMENT SUMMARY - HAZARD LABEL INFORMATION:

NIOSH approved respirator Impervious gloves Safety glasses Clothes to prevent skin contact

RESPIRATORY EQUIPMENT (SPECIFY TYPE)

NIOSH - approved respirator

EYE PROTECTION

Safety glasses

PROTECTIVE GLOVES

Rubber gloves

OTHER PROTECTIVE CLOTHING

Protective gear suitable to prevent contamination

ENGINEERING CONTROLS (VENTILATION ETC.)

Local exhaust ventilation may be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

Good general ventilation is recommended.

WORK/HYGIENIC/MAINTENANCE PRACTICES

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Silicon

<u>PHYSICAL STATES:</u>	[<input type="checkbox"/>] Gas	[<input type="checkbox"/>] Liquid	[X] Solid
<u>MELTING POINT:</u>	1410.00 C - 1420.00 C		
<u>BOILING POINT:</u>	2355.00 C - 2600.00 C		
<u>FLASH PT:</u>	N.A.		
<u>EXPLOSIVE LIMITS:</u>	LEL: NA UEL: NA		
<u>SPECIFIC GRAVITY (WATER = 1):</u>	2.33 gm/cc at 25.0 C		
<u>VAPOR PRESSURE (VS. AIR OR MM HG):</u>	1 mm at 1724.0 C		
<u>VAPOR DENSITY (VS. AIR = 1):</u>			
<u>EVAPORATION RATE (VS BUTYL ACETATE=1):</u>			
<u>SOLUBILITY IN WATER:</u>	insoluble		
<u>PERCENT VOLATILE:</u>	N.A.		
<u>FORMULA:</u>	Si		
<u>MOLECULAR WEIGHT:</u>	28.09		
<u>APPEARANCE AND ODOR</u>			
Steel gray pieces or dark brown powder, no odor.			

SECTION 10. STABILITY AND REACTIVITY

Silicon

<u>STABILITY:</u>	Unstable [<input type="checkbox"/>]	Stable [<input checked="" type="checkbox"/> X]
<u>CONDITIONS TO AVOID - INSTABILITY</u>		
None		
<u>INCOMPATIBILITY - MATERIALS TO AVOID</u>		
Oxidizing agents; alkali carbonates; (Al+PbO); Ca; Cs2C2; Cl2; CoF2; F2; IF5; MnF3; Rb2C2; FNO; AgF; NaK alloy; water and steam.		
<u>HAZARDOUS DECOMPOSITION OR BYPRODUCTS</u>		
Hydrogen gas		
<u>HAZARDOUS POLYMERIZATION:</u>	Will occur [<input type="checkbox"/>]	Will not occur [<input checked="" type="checkbox"/> X]
<u>CONDITIONS TO AVOID - HAZARDOUS POLYMERIZATION</u>		
None		

SECTION 11. TOXICOLOGICAL INFORMATION

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CHRONIC TOXICOLOGICAL EFFECTS

CARCINOGENICITY/OTHER INFORMATION

orl-rat LD50: 3160 mg/kg

Standard Draize Test Rabbit: 3 mg mild reaction

CARCINOGENICITY:

NTP? No
No

IARC Monographs? No

OSHA Regulated?

SECTION 12. ECOLOGICAL INFORMATION

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SECTION 13. DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL METHOD

Dispose of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

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LAND TRANSPORT (US DOT)

DOT PROPER SHIPPING NAME

UN/NA NUMBER:

1346

LAND TRANSPORT (EUROPEAN ADR/RID)

UN NUMBER:

1346

ADDITIONAL TRANSPORT INFORMATION

SECTION 15. REGULATORY INFORMATION

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EUROPEAN COMMUNITY HAZARD SYMBOL CODES

EUROPEAN COMMUNITY RISK AND SAFETY PHRASES

SECTION 16. OTHER INFORMATION
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No data available.

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