



# MATERIAL SAFETY DATA SHEET

## SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: Silicon Carbide

TRADE NAME(S): Metallurgical Silicon Carbide,  
Silicon Carbide Grain, De Oxo Sil

CHEMICAL FORMULA: SiC

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DATE PREPARED: November 7, 2012

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Director of Technology

## SECTION II: HAZARDOUS IDENTIFICATION

HAZARD STATEMENT: Causes skin irritation  
Causes serious eye irritation  
Can cause respiratory irritation  
May cause damage to organs  
through prolonged or  
repeated exposure

SAFETY PROCEDURES: Avoid breathing dust  
If inhaled, move to fresh  
air for comfortable breathing  
If irritating to the eyes,  
remove contact lenses,  
flush generously with water

SAFETY PRECAUTIONS: Wear personal protective devices  
Wear eye protection

OTHER INFORMATION: Irritant of the respiratory tract  
Chronic exposure can lead to silicosis  
Abrasive to skin and to the cornea  
If ingested, it is a harmful

mechanical and chemical irritant

### **SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Substance</b>	<b>Concentration Level (%)</b>	<b>CAS No.</b>	<b>ACGIH (8hr. TWA Mg/M<sup>3</sup>)</b>	<b>OSHA PEL (8hr TWA Mg/M<sup>3</sup>)</b>
Silicon Carbide	80 – 100	409-21-2	15	15 total, 5 respirable
Silicon Dioxide	0 – 8	14808-60-7		8 total, 3 as Quartz
Crystalline Silica	0 – 8	14808-60-7	0.025	0.1
Carbon (Graphite)	0 – 5	7782-42-5	2.0	
Silicon	0 – 1	7440-21-3	10.0 total, 5.0 respirable	
Crystobolite	0 – 8	14464-46-1	0.025	0.1

### **SECTION IV: FIRST AID MEASURES**

CONDITION/ACTION:

Inhalation:	Remove from exposure. Give oxygen if comfortable breathing is not restored. Get medical attention.
Skin Contact:	Remove contaminated clothing. Rinse thoroughly with water.
Eye Contact:	Irrigate eye(s) with eyewash solution or water for at least fifteen (15) minutes
Ingestion:	Do not swallow substance. Do not induce vomiting if swallowed. Seek medical attention.

### **SECTION V: FIRE FIGHTING MEASURES**

GENERAL: Non flammable  
No flash point  
No explosive limits for dust

EXTINGUISHING MEDIA: Use extinguishing media appropriate to source of the fire.

COMBUSTION PRODUCTS: None known

PROTECTIVE FIRE EQUIPMENT: Suitable protective clothing and a self contained breathing apparatus should be worn.

## **SECTION VI: ACCIDENTAL RELEASE MEASURES**

PERSONAL:	Avoid dust generation Wear personal protective devices, including eye protection and respiratory protecting to remove spills.
FIRE AND EXPLOSION:	Non flammable, Non explosive
CONTAINMENT OR CLEAN UP:	Sweep, shovel, or vacuum material Ensure adequate ventilation
WASTE DISPOSAL:	May be land filled in accordance with federal, state, and local statues.

## **SECTION VII: HANDLING AND STORAGE**

STORAGE:	No special conditions apply
HANDLING:	Ensure adequate ventilation Avoid dust generation Wear protective devices. Particles are abrasive.
STORAGE TEMPERATURE:	Ambient
STORAGE LIFE:	Stable. Not applicable.

## **SECTION VIII: EXPOSURE CONTROL/PERSONAL PROTECTION**

PERSONAL PROTECTION:	Wear protective safety glasses with side shields, or goggles Wear NIOSH approval dust protection Wear protective gloves Avoid contact with skin. Wear appropriate apparel. Provide sufficient ventilation Avoid generation of dust.
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## **SECTION IX: CHEMICAL AND PHYSICAL PROPERTIES**

FORM: Grains or powder

COLOR: Dark green to black

ODOR: Odorless

MELTING POINT: Does not melt

DECOMPOSITION TEMPERATURE: 4946 °F (2730 °C)

DENSITY: 3.21 g/cc

BULK DENSITY: 700 TO 1700 Kg/m<sup>3</sup>

FLASH POINT: Not applicable

VAPOR PRESSURE: Not available

LEL: Not applicable

UEL: Not applicable

SOLUBILITY IN WATER: Insoluble

PH: Not applicable

## **SECTION X: STABILITY AND REACTIVITY**

STABILITY: Stable. Not reactive

CONDITIONS TO AVOID: None

MATERIALS TO AVOID: Not applicable

HAZARD DECOMPOSITION PRODUCTS: None

## **SECTION X: TOXICOLOGICAL INFORMATION**

GENERAL INFORMATION:	No hazardous effects known under general use
ACUTE TOXITY:	Inhalation of dust leads to respiratory distress. Respiration of silica can lead to silicosis  Skin contact may cause abrasion.  Eye irritant that may cause tearing or inflammation  Ingestion may cause nausea and vomiting
CARCINOGENICITY:	CAS No. 14464-46-1 (Crystalline Silica) is suspected carcinogen
OTHER:	The product contains crystalline silica. Inhalation of respirable crystalline silica may cause silicosis.

## **SECTION XII: ECOLOGICAL INFORMATION**

INFORMATION ON ELIMINATION:	Insoluble in water and chemically inert.
ENVIRONMENTAL CONCERNS:	No known harmful effects
FURTHER ECOLOGICAL INFORMATION:	No known environmental problems known if handled according to general industrial practice.

## **SECTION XIII: DISPOSAL**

WASTE TREATMENT:	Disposal should be in accordance of existing federal, state, and local legislation. Waste generators must determine is classified as hazardous. US EPA guidelines are listed in 40 CFR part 261.3.
GENERAL:	The material is in general not chemically reactive and is not water soluble.

## **SECTION XIV: TRANSPORT INFORMATION**

### **LAND TRANSPORT WITHIN USA:**

UN Number: None

GGVS/ADR Classification.  
Non hazardous material

GGVE/RID Classification. Inland waterways  
Non hazardous material

GGVB/ADNR Classification. Maritime  
transport.  
Non hazardous material

GGVSee/IMDG Classification. Air transport  
Non hazardous material

ICAO-TI/IATA Classification.  
Non hazardous material

## **SECTION XV: REGULATORY INFORMATION**

### **USA NATIONAL REGULATIONS:**

TSCA (Toxic Substance Control Act)  
Silicon Carbide is listed under  
CAS No. 409-21-2

SARA 311/312  
Acute Health. Chronic Health

SARA 302 – Extremely Hazardous  
Silicon Carbide is not listed

CERCLA  
CAA (Clean Air Act). Not listed  
CWA (Clean Water Act). Not listed

State Right to know  
Silicon dioxide is listed. Quartz is listed  
in MA, MN, NJ, and PA

Proposition 65 (California). Silicon dioxide  
(silica, crystalline), quartz, are known to  
cause cancer and/or reproductive harm.

**SECTION XV: REGULATORY INFORMATION - (Continued)**

Canada

WHMIS Classification

Class D, Division 2, Subdivision B,  
Material Having Other Toxic Effects.

DSL/NDSL. Listed in DSL

Canada Ingredient Disclosure List.

Listed as required

**SECTION XVI: OTHER INFORMATION**

This information, to the best of our knowledge and belief is accurate and complete as of the date compiled. However, no presentation, warranty, or guarantee is made as to its reliability or accuracy. Miller and Company LLC accepts no liability for and loss or damage that may occur from the use of this information. The information pertains only to the specific product described and may not be used for another product or combinations of the product with others.

**NFPA**

**FIRE = 1**  
**HAZARD = 0**  
**HEALTH = 0**

