



SAFETY DATA SHEET (SDS)

(according to OSHA HCS: 29 CFR 1910.1200)

Distributed by:
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Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

GHS Product Identifier: Silicon Carbide
Chemical Names: Silicon Carbide (Mixture)
Formula: SiC
CAS No.: 409-21-2
Article No.: No other identifiers
REACH Registration No.: Not available

Recommended use and restriction on use
Recommended use: Abrasives
Restrictions on use: Contact Supplier

Details of The Supplier of The Safety Data Sheet
Company Identification Distributed by:
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Section 2 – Hazards Identification

Classification of the Substance or Mixture

Classification listed applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

Hazard Pictogram(s)



Health Hazard. Carc. 1A H350: May cause cancer. **Route of exposure:** Inhalative.

Label Elements

GHS Label Elements

The product is classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

Hazard Pictogram(s)



GHS08 Health hazard

Signal Word(s): WARNING

Hazard-determining components of labelling: Quartz (SiO₂)

Hazard Statements:

- H315:** Causes skin irritation. Not absorbed through the skin. Abrasive action may cause cuts and abrasions.
- H319:** Causes serious eye irritation. Exposure to the dust may cause redness, slightly irritation. Abrasive action may cause mechanical injury to the eyes.
- H335:** May cause respiratory irritation.
- H350:** May cause cancer. Route of exposure: Inhalation.
- R48:** Danger of serious damage to health by prolonged exposure.
- R49:** May cause cancer by inhalation.


Avoid inhaling the dust. Dust may cause respiratory tract irritation, Cough or shortness of breath. Repeated or Prolonged inhalation of dusts in exceed the NIOSH Recommended Exposure Limits (RELs) and the OSHA Permissible Exposure Limits (PELs), may cause lung inflammation or possible fibrotic changes in the lung (silicosis, cancer).

Precautionary Statements:

- P201:** Obtain special instructions before use.
- P202:** Do not handle until all safety precautions have been read and understood.
- P261:** Avoid breathing dust, fume, gases, mist, vapors, sprays.
- P281:** Use personal protective equipment as required (Wear protective Gloves/Protective Clothing/Eye Protection/Face Protection).
- P308+P313:** If exposed or concerned: get medical advice/attention.
- P501:** Dispose of contents/container in accordance with local, regional, national, international regulations.

Additional Information: Restricted to professional users.

Hazard description:

WHMIS (Canada):  D2A – Very toxic material causing other toxic effects.

NFPA (National Fire Prevention Association) ratings (scale 0 - 4): Health = 1 Flammability = 0 Reactivity = 0
HMIS (Hazardous Materials Information System) ratings (scale 0 - 4): Health = *1 Flammability = 0 Reactivity = 0

HMIS (Hazardous Materials Information System) ratings (scale 0 - 4): Health = *1 Flammability = 0 Reactivity = 0

HMIS Long Term Health Hazard Substances: Quartz (SiO₂) (CAS No.: 14808-60-7)

* - Indicates a long term health hazard from repeated or prolonged exposures.
(Rating Scale: 0 - Minimal, 1 - Slight, 2 - Moderate, 3 - Serious, 4 - Severe)

Other Hazards Results of PBT and vPvB Assessment: PBT: Not applicable vPvB: Not applicable

Section 3 – Composition / Information on Ingredients

Chemical Characterization: Substances

CAS No.	Description	% (by Weight)	Hazard Pictograms(s)	Hazard Statement(s) and Risk (R) Phrase(s)
409-21-2	Silicon Carbide	97 - 98.5		H315, H319, H335, H350

Dangerous components:

CAS No.	Dangerous Components	% (by Weight)	Hazard Pictogram(s)	Hazard Statement(s) and Risk (R) Phrase(s)
14808-60-7	Silica or Quartz (SiO ₂)	0 - 0.57		H315, H319, H335, H350, R48, R49
7440-21-3	Silicon (Si)	0 - 0.63		H315, H319, H335, H350, R48, R49
7440-44-0	Carbon (C)	0 - 0.30		H315, H319, H335, H350, R48, R49

Impurities: SiO₂, Si, C, Fe, Al each less than 1%, Total less than 3%.

Section 4 – First Aid Measures

Description of First Aid Measures

General Information: No special measures required.

After Inhalation:

Immediately move the exposed person to fresh air. If breathing is difficult, properly trained personnel may assist the affected person by administering 100% oxygen. Keep the affected person warm and at rest. Get medical attention as soon as possible if symptoms occur.

After Skin Contact:

Wash affected area thoroughly with soap and water. Obtain first aid or medical assistance if needed.

After Eye Contact:

Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After Swallowing:

Rinse out mouth and then drink plenty of water. Do not induce vomiting. Get medical attention immediately.

Information for Doctor:

Most Important Symptoms and Effects, both acute and delayed:

Coughing. Gastric or intestinal disorders. Breathing difficulty.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

Section 5 – Fire Fighting Measures

Extinguishing Media:

- Suitable Extinguishing Media: Use fire extinguisher methods suitable for surrounding conditions.
- Unsuitable Extinguishing Media: None

Special Hazards arising from the Substance or Mixture:

No further relevant information available.

Advice for Fire-Fighter:

Wear a self-contained respiratory protective device, and suitable fully protective suit. Use firefighting measures that suit the environment.

Additional Information:

No further relevant information available.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Review Section 3, 7, and 8 before proceeding with clean-up. Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Do not walk through spilled material. Spilled material can be a slipping hazard. Avoid breathing dust, ensure full personal protection (including respiratory protection) during clean-up and removal of spillages. If possible, vacuum the material to avoid generation unnecessary dust. (For emergency and Non-emergency personnel)

Environmental Precautions:

Do not allow to enter sewers/surface or ground water.

Methods and Material for Containment and Cleaning Up:

Collect mechanically and dispose contaminated material as waste according to Section 13 (See also: Section 7, 8). Send for recovery or disposal in suitable receptacles. Avoid dust generation. Water mist may be added as necessary to control the level of airborne dusts. Ensure adequate ventilation.

Section 7 – Handling and Storage

Precautions for Safe Handling:

Avoid contact with eyes or skin. Wear appropriate gloves and protective eyewear to avoid any skin and eyes injury. Avoid dust formation. **DO NOT** use compressed air or dry sweeping to remove dust from work area. Dust should be removed using an appropriately filter-equipped vacuum. If a filter-equipped vacuum is unavailable, only wet-clean-up methods should be used. Moisture should be added as necessary to avoid generating dusts. Avoid breathing dust. Use suitable full personal protection (including respiratory protection) in case exposure to high levels of airborne dust. The worker should wash hands and face before eating, drinking, smoking, or applying cosmetics outside of the exposure area (See also: Section 6, 8).

Information About Protection Against Explosions and Fires: No special measures required

Conditions for Safe Storage, including any Incompatibilities:

Requirements to be met by Storerooms and Receptacles: No special requirements.

Information about Storage in One Common Storage Facility: Store away from oxidizing agents and foodstuffs.

Further Information about Storage Conditions: This product is hygroscopic. Recommend store in the original container in cool, dry conditions, and well-ventilated area. Protect from humidity and water.

Specific end Use(s): No further relevant information available.

Section 8 – Exposure Controls / Personal Protection

Additional Information about Design of Technical Facilities: No further data. (see also Section 7)

Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Substance	CAS No.	OSHA (PEL)	ACGIH (TLV)	NIOSH (REL)
Silicon Carbide	409-21-2	Total Dust (8 hour/TWA) 15 mg/m ³	Total Dust (8 hour/TWA) 10 mg/m ³	Total Dust (8 hour/TWA) 10 mg/m ³
		Respirable (8 hour/TWA) 5 mg/m ³	Respirable (8 hour/TWA) 3 mg/m ³	Respirable (8 hour/TWA) 5 mg/m ³
Silicon *	7440-21-3	Total Dust (8 hour/TWA) 15 mg/m ³	Total Dust (8 hour/TWA) 10 mg/m ³	Total Dust (8 hour/TWA) 10 mg/m ³
		Respirable (8 hour/TWA) 5 mg/m ³	Respirable (8 hour/TWA) 3 mg/m ³	Respirable (8 hour/TWA) 5 mg/m ³
Crystalline Silica* or Quartz (SiO ₂)	14808-60-7	Total Dust (8 hour/TWA) 30 mg/m ³ /(%SiO ₂ +2)	Total Dust (8 hour/TWA) 10 mg/m ³	Respirable (8 hour/TWA) 0.1 mg/m ³ See NIOSH Pocket Guide Appendix G
		Respirable (8 hour/TWA) 10 mg/m ³ /(%SiO ₂ +2) or 250 mppcf/(%SiO ₂ +5)	Respirable (8 hour/TWA) 0.1 mg/m ³	

The lists that were valid during the creation were used as basis.

* NIOSH Method 0500 (Total), Method 0600 (Respirable) – PROPERTIES: contains no asbestos and quartz less than 1% (Issue 3: January 15, 1998)

DNELs: No further relevant information available.

PNECs: No further relevant information available.

Exposure Controls

Personal Protection Equipment:

General Protective and Hygienic Measures:

- The usual precautionary measures for handling chemicals should be followed.
- Do not inhale dust/smoke/mist.
- Avoid contact with the eyes and skin.
- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing. Laundered before reuse.

Respirators Protection:

Avoid inhaling the dusts. If user operation generation dusts, maximum respiratory protection should be mandatory. Must be wear a NIOSH/MSHA approved respiratory protection devices to against airborne dust. Suitable, appropriate respiratory selection will be dependent upon the magnitude of exposure and purpose intended. Must be selected in accordance with OSHA respiratory protection standard found in 29 CFR 1910.134 or European Standard EN 149.

Eye Protection:

Avoid eye contact. Wear protective eyewear (goggles, face shield, or safety glasses with side shield) to prevent eye contact.

Skin Protection:

Wear appropriate personal protective clothing and gloves to prevent skin contact/or against mechanical hazards according to OSHA and NIOSH rules. The gloves material has to be impermeable and resistant to the product/the substance/the preparation.

Body Protection:

Not required under normal conditions of use. Protection may be required for spills.

Engineering Controls:

No further relevant information available.

Limitation and Supervision of Exposure in the Environment

No further relevant information available.

Risk Management Measures

No further relevant information available. (See also Section 7 for additional information.)

Additional information:

- The accumulation of airborne dust particles may lead to health and safety risks in some cases. The use of good industrial practices will mitigate this risk.
- The health risks from inhalation of dust particles vary; this is due to particle concentration, exposure length, number of exposures and type of particles inhaled. Please read Section 2,4,6,7 and 8 of the SDS to understand these potential risks.
- In rare instances, combustible dusts may represent a potential explosion hazard when airborne. This hazard is often associated with organic dust such as foodstuffs and coal, but may also occur with mineral products. While the majority of our products would be considered non-combustible, the overall airborne environment should be considered when determining the need for mitigation from the potential hazard.

Therefore, it is highly recommended the users assess exposure concentrations of all materials involved in the workplace. Wear personal protective equipment, provide adequate mechanical ventilation, and local exhaust/or dust collection as needed to control airborne dust concentrations and minimize exposure. Maintain clean and safe work environment. Follow the regulations found in the OSHA General Industry Air Contaminants Standard (29 CFR 1910.1000; and 29 CFR 1915.1000).

Section 9 – Physical and Chemical Properties

Appearance:	Granulate	Hardness:	Mohs 9.15 / Knoop 2500
Color:	Black	Micron Hardness:	3,100 – 3,200 kg/mm ²
Odor:	Odorless	Specific Gravity(H ₂ O = 1):	3.2 g/cm ³
Odor Threshold (ppm):	Not Available	Density at 20 (° C):	>3.12 g/cm ³
Basic Mineral:	SiC	Bulk Density:	1.41 - 1.55g/cm ³
pH (Value):	Not Available	Auto-ignition Temperature:	Not Available
% Volatile:	Not Available	Flash Point (° C):	Not Available
Vapor Pressure (mm Hg):	Not Available	Flammability (Solid, Gas):	Not Available
Vapor Density (Air = 1):	Not Available	Evaporation Rate:	Not Available
Boiling Point/Boiling Range (° C):	Not Available	Oxidizing Properties:	Not Available
Melting Point (° C):	Dissociates at approx. 2300 °C	Explosive Limit Ranges:	Not Available
Freezing Point (° C):	Not Available	Explosive Properties:	None
Decomposition Temperature :	Not Available	Explosion Limits (Lower):	Not determined
Solubility (Water):	insoluble	Explosion Limits (Upper):	Not determined
Solubility (Other) :	Not Available	Viscosity (mPa.s)	Not Available
Partition Coefficient (N-Octanol/Water)	Not Available	Linear Expansion Coefficient (When 900 °C, 10 ⁻⁶ /°C)	4.4

Other Information: Volatile Organic Chemical (VOC) Content – Not Available.

Section 10 – Stability and Reactivity

Reactivity:

Chemical Stability:

Thermal decomposition/conditions to be avoided:

No decomposition if used and stored according to specifications.

Possibility of Hazardous Reactions:

Reacts with strong acids. Reacts with strong oxidizing agents. Reacts with strong alkali.

Conditions to Avoid:

No further relevant information available.

Incompatible Materials:

No further relevant information available.

Hazardous Decomposition Product(s):

Possible in traces.

Section 11 – Toxicological Information

Information on Toxicological Effects

Acute toxicity:

LD/LC50 Values that are Relevant for Classification: None

Primary Irritant Effect:

- On the skin: No irritant effect.
- On the eye: Slight irritant effect on eyes.

Sensitization: No sensitizing effects known.
Subacute to chronic toxicity: Suspected of causing cancer via inhalation.
Additional toxicological information:
Probable Routes of Exposure: Inhalation, Eye contact, Skin contact.
Acute Effects (acute toxicity, irritation, and corrosivity): From product as supplied: None.
Repeated Dose Toxicity:
 Suspected of causing cancer. Repeated or long-term inhalation of product dusts may cause pulmonary disease. May cause damage to organs through prolonged or repeated exposure.
CMR effects (carcinogenic, mutagenicity, and toxicity for reproduction): Carc. 1A

Section 12 – Ecological Information

Toxicity

Aquatic toxicity: No further relevant information available.
Persistence and Degradability: No further relevant information available.
Behavior in Environmental Systems
Bioaccumulative Potential: No further relevant information available.
Mobility in Soil: No further relevant information available.
Results of PBT and vPvB Assessment: Not applicable.
Other Adverse Effects: No further relevant information available.

Section 13 – Disposal Considerations

Waste Treatment Methods and Recommendation:

Contact waste processors for recycling information. Do not disposed together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned Packagings:

Recommendation: Disposal must be made according to official regulations.

Section 14 – Transport Information

U.S. DOT Classification (Department of Transportation):

This product is not classified as a hazardous material under the DOT regulations for road, rail, sea, or air transport (49 CFR 172.101). No UN code assigned. No placard required for transportation.

IATA-International Air Transport Association Classification:

Not regulated as a hazardous material

IMDG-International Maritime Code for Dangerous Goods Classification:

Not regulated as a hazardous material.

Mexico Classification:

Not regulated as a hazardous material.

TDG-Transportation of Dangerous Goods Classification:

Not regulated as a hazardous material.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Section 15 – Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

United States (USA)

SARA Section 355 (Extremely Hazardous Substances):

None of the ingredients are listed.

SARA Section 313 (Specific Toxic Chemical Listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act)

All ingredients are listed.

Proposition 65 (California)

Chemicals known to cause cancer:

Quartz (SiO₂) (CAS No.: 14808-60-7)

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic Categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

Quartz (SiO₂) (CAS No.: 14808-60-7)

ACGIH-TLV(Threshold Limit Value)

Silicon Carbide (SiC) (CAS No.: 409-21-2)

Quartz (SiO₂) (CAS No.: 14808-60-7)

NIOSH-Ca (National Institute for Occupation Safety and Health)

Quartz (SiO₂) (CAS No.: 14808-60-7)

Canada

DSL (Canadian Domestic Substances List)

CIDL (Canadian Ingredient Disclosure List-limit 0.1%)

CIDL (Canadian Ingredient Disclosure List-limit 1%)

Other regulation, limitations and prohibitive regulations

Substances of very high concern(SVHC) according to REACH, Article 57

Chemical Safety Assessment

All ingredients are listed.

None of the ingredients are listed.

Quartz (SiO₂) (CAS No.: 14808-60-7)

None of the ingredients are listed.

A Chemical Safety Assessment has not been carried out.

Section 16 – Other Information

4 of 6 pages

DISCLAIMER

This Safety Data Sheet contains important environmental safety and health information for those will be using this product. The information it contains is based on our present knowledge of the product on the date indicated. It is given in good faith. Although certain hazards are listed herein, there is no guarantee that these are only risks. These regulatory prescriptions are only provided with a view to helping users meet their obligations when using this product. This information shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Users should be warned and assumes all risks associated with using the product for a different purpose than that for which it was developed, and particularly for uses for which we are not qualified to give advice. Therefore, it is highly recommended the users evaluate their own operating conditions to determine whether this product is suitable for their particular purposes prior to use, or consult recognized experts when necessary in order to determine the safety of use, handling, storage, transportation, disposal, and suitability for the intended utilization of the product. However, this information should not be considered exhaustive and does not exempt users from ensuring that they are not required to comply with any further prescriptions other than those mentioned above concerning product possession and handling for which they are solely responsible. The users must comply with all applicable health and safety laws, regulations and orders, including the OSHA Hazardous Communication Standard. Laguna Clay Company makes no expressed or implied guarantee with respect to the accuracy of the information, shall not be liable for any damages resulting from handling, contact, use, or inability to use of this product.

Abbreviations and Acronyms:

ACGIH:	American Conference of Governmental Industrial Hygienists	ppm	Parts Per Million
Carc. 2:	Carcinogenicity, Hazard Category 2	RCRA:	Resource Conservation and Recovery Act
CAS:	Chemical Abstracts Service	REL	Recommended exposure limits
CLP:	Regulation (EC) No.1272/2008 on Classification, Labelling and Packaging of substances and mixtures	REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
CFR:	Code of Federal Regulations	OSHA:	Occupational Safety and Health Administration
DPD	Dangerous Preparations Directive (1999/45/EC)	SARA:	Superfund Amendments and Reauthorization Act
EPA:	Environmental Protection Agency	Title III:	Emergency Planning and Community Right to Know Act
HMIS:	Hazardous materials Information System	Section 355:	Extremely Hazardous Substances
mg/m³	Milligrams per cubic meter	Section 311:	MSDS/List of Chemicals and Hazardous Inventory
mppcf	Millions of particles per cubic foot of air	Section 312:	Emergency and Hazardous Inventory
NA:	Not Applicable, Not Available	Section 313	Toxic Chemicals and Release Reporting
ND:	Not determined	STEL:	Short-Term Exposure Limit
NIOSH:	National Institute for Occupational Safety and Health	TLV:	Threshold Limit Value (from ACGIH)
NTP:	National Toxicology Program	TSCA:	Toxic Substances Control Act
OSHA:	Occupational Safety and Health Administration	TWA	Time-Weighted Average
PEL:	Permissible Exposure Limit	WHMIS	Workplace Hazardous Materials Information System
LC50:	Lethal Concentration, 50 percent	LD50:	Lethal Dose, 50 percent

**** END OF MATERIAL SAFETY DATA SHEET ****



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