

Section 1: Chemical Product and Company Information

1.1 Product Identifier

Common Name: Microgrit Silicon Carbide
Trade Name: Microgrit SIC, Microgrit GC, Microgrit PG

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Free abrasive machining and lapping
Uses Advised Against: None identified

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Supplier:

Micro Abrasives Corporation
720 Southampton Road
P.O. Box 669
Westfield, MA 01085
Tel: 413-562-3641
Fax: 413-562-7409

European Contact:

Pieplow & Brandt GmbH
Postfach 1431
Henstedt-Ulzburg
Germany D24558
Contact: Axel Brandt
PH: +49 4193 880 84 0

1.4 Emergency Telephone Number

In United States, Canada, Puerto Rico, and the U.S. Virgin Islands: 1 (800) 255-3924
Outside the United States: +01 or +001 (813) 248-0585 (Call collect if necessary)
In China: (020) 84616908, Contact Person: Mr. Jacky Cheng

Email: SDS@microgrit.com

Website: www.microgrit.com

SDS Date of Preparation/Revision: January 9, 2023

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture

EU CLP Classification (1272/2008): Not classified as hazardous
GHS Classification: Carcinogen Category 1 (H350)
US OSHA Classification (29CFR1910.1200): Carcinogen Category 1 (H350)

2.2 Label Elements:

Danger!



May cause cancer if inhaled.

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves.
IF exposed or concerned: Get medical attention.
Dispose of contents and container in accordance with local and national regulations.

Supplemental Labeling: Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being processed. Most of the dust generated during abrasive processing is from the base material or coatings and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

2.3 Other Hazards: None identified

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Section 3: Composition/Information on Ingredients

3.2 Mixture

Component	CAS Number/ EINECS Number.	Amount	GHS Classification (1272/2008)
Silicon Carbide	409-21-2 / 206-991-8	100%	Not Hazardous
Crystalline silica, quartz	14808-60-7 / 237-878-4	<1	Carc 1 H350 STOT RE 1 H372

Refer to Section 16 for Full Text of GHS Classes and H Statements if applicable

Section 4: First Aid Measures

4.1 Description of First Aid Measures

First Aid

Eyes: Remove contact lenses if present and easy to do. Flush eyes thoroughly with large amounts of water, holding eyelids open. If irritation persists, seek medical attention.

Skin: Wash skin with soap and water. If irritation or other symptoms develop, seek medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water. Seek medical attention if large amount is swallowed or if you feel unwell.

Inhalation: Move person to fresh air. If breathing is difficult, have qualified personnel administer oxygen. Seek medical attention if irritation or other symptoms persist.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: Dust may cause eye and respiratory irritation. Prolonged inhalation of high concentration of dust may cause adverse effects on the lungs. Contains crystalline silica. Prolonged overexposure to respirable dust may increase the risk of lung cancer. Risk of cancer depends on duration and level of exposure. Exposure to dust generated from processing the base material or coatings may present additional health hazards.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention should not be required.

Section 5: Fire Fighting Measures

5.1 Extinguishing Media: Use any media that is suitable for the surrounding fire.

5.2 Special Hazards arising from the Substance or Mixture: This product is not flammable or combustible; however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable or explosive dusts or turnings when ground.

5.3 Advice for Fire-Fighters: Wear positive pressure self-contained breathing apparatus and full protective clothing for fires involving chemicals.

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Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.

6.2 Environmental Precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.

6.3 Methods and Material for Containment and Cleaning Up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

6.4 Reference to Other Sections:

Refer to Section 13 for disposal information and Section 8 for protective equipment.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling:

Avoid breathing dust. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the materials or coatings being processed. Refer to OSHA's Respirable Crystalline Silica Standard (29CFR1910.1053) and other substance specific standards for additional work practice requirements where applicable.

7.2 Conditions for Safe Storage, Including any Incompatibilities: No special storage required.

7.3 Specific end use(s):

Industrial uses: Abrasive

Professional uses: None identified

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	German OEL	China OEL	Biological Limit Value
Silicon Carbide	5 mg/m ³ TWA (respirable), 15 mg/m ³ TWA (total dust) OSHA PEL 3 mg/m ³ (respirable), 10 mg/m ³ (inhalable) TWA ACGIH TLV	None Established	None Established	4 mg/m ³ TWA (respirable) 8 mg/m ³ TWA (total dust)	None Established
Crystalline Silica Quartz	0.05 mg/m ³ TWA OSHA PEL (respirable dust) 0.025 mg/m ³ TWA ACGIH TLV (respirable dust)	None Established	None Established	0.5 mg/m ³ TWA (total dust) 0.2 mg/m ³ TWA (respirable dust)	None Established

DNEL: None established

PNEC: None Established

8.2 Exposure Controls:

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Recommended Monitoring Procedures: Collection on filters, using size selection methods and analysis by XRD.

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Personal Protective Measurers

Respiratory Protection: Not necessary unless workplace concentrations of hazardous constituents exceed the exposure limits. If the exposure levels are excessive and irritation or other symptoms are experienced, an approved respirator should be worn. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134 and ANSI Z88.2 or other applicable regulations and standards and good Industrial Hygiene practice.

Eye Protection: Use safety glasses with side shields or goggles.

Skin Protection: Protective gloves recommended to avoid skin abrasion when handling. Wear protective clothing as required to avoid skin contact when handling.

Other protection: Hearing protection recommended if operation is noisy.

Section 9: Physical and Chemical Properties

9.1 Information on basic Physical and Chemical Properties:

Appearance and Odor: Green to black solid (crystals), odorless.

Solubility in Water:	Insoluble	Boiling Point:	Not applicable
Odor Threshold:	Not applicable	Partition Coefficient:	Not applicable
pH:	Not applicable	Melting Point:	2600 °C (4712°F) sublimes
Specific Gravity:	3.2	Vapor Density:	Not applicable
Evaporation Rate:	Not applicable	Vapor Pressure:	Not applicable
Flammability(solid/gas):	Not applicable	Flash Point:	Not applicable
Explosive Limits:	Not applicable	Autoignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable	Viscosity:	Not applicable
Explosive Properties:	None	Oxidizing Properties:	None

9.2 Other Information: None

Section 10: Stability and Reactivity

10.1 Reactivity: Not reactive under normal conditions of use and storage.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: None known.

10.4 Conditions to Avoid: None known.

10.5 Incompatible Materials: None known.

10.6 Hazardous Decomposition Products: None known. Dust from abrasive processing could contain potentially hazardous components of the base material being processed or coatings applied to the base material.

Section 11: Toxicological Information

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11.1 Information on Toxicological Effects:

Potential Health Hazards

Inhalation: Breathing dust may cause irritation to the nose, throat and upper respiratory tract.

Skin Contact: May cause abrasive skin irritation.

Eye Contact: May cause abrasive irritation and injury.

Ingestion: Not toxic. Swallowing may cause gastrointestinal disturbances.

Chronic Health Effects: Prolonged inhalation of respirable dust may cause adverse lung effects. Most of the dust generated during abrasive processes is from the base material being processed and the potential hazard from this exposure must be evaluated.

Acute Toxicity Values:

Silicon Carbide: LD50 oral rat >2,000 mg/kg; LD50 dermal rabbit >2,000 mg/kg; No signs of acute toxicity in animal inhalation studies.

Crystalline Silica, Quartz: Oral rat LD50 >22,500 mg/kg

Skin corrosion/irritation: No skin changes were observed in a dermal toxicity study.

Eye damage/ irritation: No data available for this product. Not expected to be a chemical eye irritant. Eye contact may result in abrasive irritation and injury.

Respiratory Irritation: No chemical irritation expected.

Skin Sensitization: No data available for the product. Not expected to be a skin sensitizer based on human experience.

Respiratory Sensitization: No data available. Not expected to be a respiratory sensitizer based on human experience.

Germ Cell Mutagenicity: This product is not expected to present a risk of genetic damage. Negative in a bacterial reverse mutation assay.

Carcinogenicity: Crystalline silica quartz is listed as "Carcinogenic to Humans" (Group 1) by IARC and "Known to be a Human Carcinogen" by NTP. Silicon carbide is not listed as a carcinogen or potential carcinogen by ACGIH, IARC, NTP, OSHA or the EU CLP. Granular silicon carbide was not carcinogenic in an intraperitoneal study with rats.

Developmental / Reproductive Toxicity: No specific data is available; however, this product is not expected to present a risk of adverse reproductive or developmental toxicity.

Specific Target Organ Toxicity (Single Exposure): No specific data is available.

Specific Target Organ Toxicity (Repeated Exposure): No increased mortality or cancer morbidity was observed in an epidemiological study of abrasive workers exposed to silicon carbide. Silicon carbide did not cause adverse effects on the lungs of rats exposed by inhalation at a concentration of 20 mg/m³. Chronic inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

Section 12: Ecological Information

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No adverse effects on aquatic organisms are expected. However, consideration must be given to potential environment effects of the base material being processed.

12.1 Toxicity: No data available. Silicon carbide is an inert, insoluble material. No adverse effects on aquatic organisms are expected.

Crystalline Silica: 72 hr LC50 carp >10,000 mg/L

12.2 Persistence and degradability: Biodegradation is not applicable to inorganic substances.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PVT and vPvB assessment: Components do not meet the criteria for PBT or vPvB.

12.6 Other Adverse Effects: None known.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods:

Dispose in accordance with all local, state and national regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations

Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not Regulated	None	None	
Canadian TDG	None	Not Regulated	None	None	
EU ADR/RID	None	Not Regulated	None	None	
IMDG	None	Not Regulated	None	None	
IATA/ICAO	None	Not Regulated	None	None	

14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex II MARPOL 73/78 and the IBC Code: Not determined

Section 15: Regulatory Information

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

INTERNATIONAL INVENTORIES

US EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory or exempt.

Australia: All of the components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or exempt.

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Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL) or exempt.

China: All of the components in this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or exempt.

European Union: All the components in this product are listed on the EINECS inventory or exempt.

Japan: All of the components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) inventory or exempt.

Korea: All of the components in this product are listed on the Korean Existing Chemicals List (KECL) or exempt.

New Zealand: All of the components in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempt.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or exempt.

Taiwan: All of the components of this product are listed on the National Existing Chemical Inventory (NECI) in Taiwan or exempt.

United States Regulations

EPA SARA Regulations:

SARA 311/312 Hazard Categories: Refer to Section 2 for OSHA Hazard Classification

SARA 313: This contains the following chemicals above de minimus concentrations subject to the notification or reporting requirements of SARA 313: None

CERCLA Section 103: This product is not subject to CERCLA release reporting. Many states have more stringent spill reporting requirements. Report spills in accordance with all applicable regulations.

RCRA Status: This product, as sold, is not regulated under RCRA as a hazardous waste.

State Requirements

California Proposition 65: This product contains the following chemical known to the State of California to cause cancer:

Crystalline silica, quartz	14808-60-7	<1%
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Connecticut Carcinogen Substances: None listed.

Florida Essential Chemical List: None listed

Maine Chemicals of High Concern: Crystalline, Silica, Quartz,

Massachusetts Right To Know List: Silicon Carbide, Crystalline, Silica, Quartz,

Michigan Critical Materials List: None listed

Minnesota Hazardous Substances: Silicon Carbide, Crystalline, Silica, Quartz,

New Jersey Right To Know Hazardous Substances List: Silicon Carbide, Crystalline, Silica, Quartz,

New York List of Hazardous Substances: None listed

Ohio Extremely Hazardous Substances List: None Listed

Pennsylvania RTK Hazardous Substance: Silicon Carbide, Crystalline, Silica, Quartz,

Rhode Island Hazardous Substances List: Silicon Carbide, Crystalline, Silica, Quartz,

Washington Persistent Bioaccumulative Toxins: None listed

Wyoming Process Safety Management – Highly Hazardous Chemicals: None listed

German Regulations

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Substances Hazardous to Water (WGK): WGK 1

European Union

Regulation (EC) 1907/2006 REACH Article 59(1), Candidate List: None listed

Section 16: Other Information

NFPA RATING (NFPA 704) FIRE: 0 HEALTH: 1 INSTABILITY: 0

HMIS RATING FIRE: 0 HEALTH: 1* PHYSICAL HAZARD: 0

SDS Revision History: Section 2 GHS Classification, US OSHA Classification, Label Elements, Section 3 Components, Section 4.2 Most Important symptoms and effects, both acute and delayed, Section 8.1 Control Parameters, Section 9.1 Melting Point, Section 11 Acute Toxicity Values, Carcinogenicity, Specific Target Organ Toxicity (Repeated Exposure), Section 12.1 Toxicity, Section 15 EPA SARA Regulations, State Requirements, Section 16 HMIS Rating

GHS Classes and Risk Phrases and Hazard Statements for Reference (See Sections 2 and 3):

STOT RE 2 Specific Target Organ Toxicity – Repeat Exposure Category 2

Carc 1 A Carcinogenicity Category 1A

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

SDS Date of Preparation: 01/09/17

Date of last revision: January 9, 2023

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. MicroAbrasives Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.