



FEDERATION EUROPEENNE DES  
FABRICANTS DE PRODUITS ABRASIFS

EG – Material Safety Data Sheet

**Silicon Carbide (SiC)**

Version/Date: 03.08.2010



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**MATERIAL SAFETY DATA SHEET FOR SILICON CARBIDE (SiC) GRIT**  
- Formatted by FEPA as per EC Directive 91/155/EG and ISO Standard 11014 -

## 1. Identification of Product and Company

### 1.1 Product name:

Silicon Carbide, SiC, Silicon Carbide Green, Silicon Carbide Dark

### 1.2 Application:

Abrasive grit

### 1.3 Company identification:

KREBS & RIEDEL Schleifscheibenfabrik GmbH & Co. KG

Bremer Straße 44

34385 Bad Karlshafen

GERMANY

Telefon: +49 5672 184 0

Telefax: +49 5672 184 218

E-mail: mail@krebs-riedel.de

### 1.4 Emergency telephone number:

Giftnotrufzentrale (GIZ Nord) +49 (0)551-19240

## 2. Composition / Information on Ingredients

The product typically contains the following ingredients:

	Name	CAS	EG No. (ELINCS/EINECS)	Concentration in %
1	Silicon carbide	409-21-2	206-991-8	90-99,9
May also contain	C, Si, Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , CaO, MgO and traces of crystalline silica	-	-	

The product does not contain any ingredients that require marking as per 67/548 EEC and 99/45 EG

## 3. Hazards Identification

No specific toxicity for SiC grains.

SiC is not an officially listed hazardous substance.

According to ACGIH, insoluble or poorly soluble particles not otherwise specified (PNOS).

Crystalline silica proportion is significantly less than the measurable SiO<sub>2</sub> content.

## 4. First Aid Measures

**4.1 Inhalation:** No special action required. If exposed to excessive levels of dust remove to fresh air and get medical advice if symptoms occur.

**4.2 Skin contact:** No special action required. Do not rub or scratch exposed skin. Seek medical attention if needed.

**4.3 Eye contact:** Flush with plenty of clean water. Seek medical advice if irritation persists.

**4.4 Ingestion:** No special action required. Do not induce vomiting.  
If necessary contact physician



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## 5. Fire Fighting Measures

- 5.1 General information:** The product is not inflammable.
- 5.2 Suitable extinguishing media:** Use extinguishing media appropriate to the source of fire.
- 5.3 Extinguishing media not to be used**  
**not to be used for safety reasons:** None known
- 5.4 Special exposure hazards arising from the substance itself, combustion products, resulting gasses:** None known
- 5.5 Special protective equipment:** None required

## 6. Accidental Release Measures

- 6.1 Personal precautions:** Limit dust formation, use disposable dust protection mask (P2 as minimum).
- 6.2 Environmental precautions:** No special measures required.
- 6.3 Methods for cleaning up:** Pick up mechanically and dispose of in accordance with local, state, or federal regulations.

## 7. Handling and Storage

- 7.1 Handling:**
- Precautions for safe handling:** Limit dust formation.
- Precautions against fire and explosion:** No danger of fire or explosion.
- 7.2 Storage**
- Conditions of storage rooms and vessels:** No special precautionary measures required.
- Advice of storage of incompatible materials:** None
- Further information on storage:** None

## 8. Exposure Control / Personal Protective Equipment

**8.1 Further information for system design and engineering measures:**  
Use engineering controls to ensure compliance with applicable dust exposure limits (implies air monitoring strategy, proper selection of air sampling equipment and statistical analysis of dust levels).

### 8.2 Components with specific control values:

See below for examples of exposure limits (8 hours TWA, mg/m<sup>3</sup>):

	Country	Inhalable (total) dust	Respirable dust
1	France	10	233-13-66
2	Germany	10	-
3	USA (ACGIH)	10	215-691-6

### 8.3 Personal protection equipment:

#### General hygiene:

Observe standard industrial hygiene practices (e.g.: do not eat or drink on the job, comply with smoking regulations). The use of barrier skin creme is recommended.

#### Respiratory protection:

Avoid inhalation of dust, in case of dust formation use a disposable dust protection mask (P2 as minimum). Fine-dust mask with category 1 filter must be used if fine dust limits are exceeded.

#### Respiratory protection:

Use respiratory equipment (type depends on specific application and material being ground)

#### Hand protection:

Protective gloves are optional.

#### Eye protection:

Protective goggles are strongly recommended.



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## 9. Physical and Chemical Properties

### 9.1 Appearance:

**Form:** Solid, grains or powder  
**Colour:** Green, black or grey  
**Odour:** Odourless

### 9.2 Physical and chemical properties:

**Change in physical state:** Not under normal conditions of use  
**Flash point:** Not applicable  
**Flammability:** Not applicable  
**Ignition temperature:** Not applicable  
**Spontaneous ignition:** Not applicable  
**Oxidizing properties:** Not applicable  
**Explosive limits:** Not applicable  
**Specific gravity:** Approx. 3.2 g/cm<sup>3</sup>  
**Bulk density:** 700 to 1700 kg/m<sup>3</sup>  
**Solubility in water:** Not soluble  
**pH value:** Not applicable

### 9.3 Dustiness:

Dustiness of SiC has been classified according to the CEN 137 standard.

## 10. Stability and Reactivity

**10.1 General information:** The material is stable, no hazardous reactions known.  
**10.2 Conditions to avoid:** Not applicable  
**10.3 Materials to avoid:** Not applicable  
**10.4 Hazardous decomposition products:** Not applicable

## 11. Toxicological Information

### 11.1 General information:

No hazardous effects known if used according to the rules. The material is chemically inert and not bioavailable.

"Non-fibrous forms of SiC, sometimes referred to as "angular" particles are irregular in shape and occur as respirable and non-respirable particles. The non-fibrous forms of SiC have very low toxicity in humans and experimental animals. The TLV-TWA for non-fibrous forms is, therefore, set at the level of "poorly" soluble particles not otherwise specified (PNOS), being 10 mg/m<sup>3</sup> for inhalable particles, and 3 mg/m<sup>3</sup> for respirable particles." (ACGIH Toxicology review 2001).

### 11.2 Acute toxicity

**Eye:** Irritation by mechanical effects possible; prolonged contact may cause tears and redness.  
**Skin:** Irritation by mechanical effects possible.  
**Inhalation:** May cause respiratory tract irritation with coughing and shortness of breath.  
**Ingestion:** No harmful effects are anticipated.

## 12. Ecological Information

**12.1 Ecotoxicity:** no effects known  
**12.2 Mobility:** no potentials known  
**12.3 Persistence und degradability:** no biodegradable potentials known  
**12.4 Bioaccumulative potential:** no potentials known  
**12.5 Other hazardous effects:** no effects known



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### 13. Disposal Considerations

#### 13.1. Material:

National and local regulations have to be observed.

Due to its ingredients and properties disposal as non hazardous waste (2000/532/EC) is possible, if no hazardous materials have been added to the SiC in course of its use. (EWC - SN 120121).

#### 13.2. Packing material:

Packaging has to be emptied entirely; recycling of used packaging is recommended.

National and local regulations have to be observed.

### 14. Transport Information

**14.1 Land transport (GGVS/ADR, GGVE/RID):** Non hazardous material

**14.2 Inland waterways (GGVBisich/ADNR):** Non hazardous material

**14.3 Maritime transport (GGVSee/IMDG):** Non hazardous material

**14.4 Air transport (ICAO-TI/IAT):** Non hazardous material

### 15. Regulatory Information

**15.1 Toxicological classification:** SiC is not classified as a hazardous substance.

**15.2 Labelling:** According to common / agreed label for SiC<sub>Ma</sub> companies.

### 16. Further Information

ACHIG review:

British Journal of Industrial Medicine, 1993, vol. 50, issue 9, pages 797-806 (part 1) and 807-813 (part2)

Abbreviations:

TLV: Threshold Limit Value

TWA: Time Weighted Average

ACGIH: American Conference of Governmental Industrial Hygienists

PNOS: Particles Not Otherwise Specified

SiC<sub>Ma</sub>: Silicon Carbide Manufacturers Association

Disclaimer:

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The above information do not constitute any warranty of properties of the product. This information is not part of any contractual agreement, the product specification is contained in a separate product technical data sheet.

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