Safety Data Sheet
Silicon carbide (SiC)

According to Regulation (EC) No 1907/2006

1.0 IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or preparation : Silicon Carbide

Registration number : 01-2119402892-42-0010

1.2 Use of the product : Abrasives / Refractories / Silicon wafer slicing / Diesel Particulate Filter / Blasting / Foundry

1.3 Manufacturer

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2.0 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

SiC is not classified as dangerous substance or preparation according to directive 67/548/EEC or directive 1999/45/EC.

2.2 Label elements
No labelling required for SiC.
2.3 Other hazards
SiC does not fulfill the criteria for the classification as PBT or vPvB.
No specific toxicity described for SiC crude and grains.
SiC is not an officially listed hazardous substance.
According to ACGIH SiC is insoluble or made of poorly soluble particles not otherwise specified (PNOS).

3.0 COMPOSITION/INFORMATION ON INGREDIANTS

Contains SiC (EC N°: 206-991-8, CAS# 409-21-2) in the 98-99.5 % range (not classified according to directive 67/548/EEC)

Other ingredients: SiO_2 -0.1-1%, Free C 0-0.5%, Si 0 to 1%

May also contain traces of respirable crystalline silica ((less than 0.01% w/w; the regulatory limit is 0.1% w/w)

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation - No special action required

Skin contact - No special action required
Mechanical irritant, prolonged contact may cause skin abrasion
Seek medical attention if needed.

Eye contact - Flush with plenty of clean water
Mechanical irritant, contact may cause tearing and redness
Seek medical advice if irritation persists

Ingestion - No special action required

4.2 Most important symptoms and effects, both acute and delayed

Not applicable

4.3Indication of any immediate medical attention and special treatment needed

No specific treatment required

5.0 FIRE FIGHTING MEASURES

5.1 General Information - Not inflammable

Suitable extinguishing media - Use extinguishing measures appropriate to the source of fire

Extinguishing media not to

Used for safety reasons - None known

5.2 Special exposure hazards arising from the substance or mixture
No special exposure hazards known arising from the product itself, combustion products or resulting gases.

5.3 Advice for firefighters
Special protective equipment Not applicable

5.4 Special exposure hazards arising from the substance itself, combustion products, resulting gases - None known

5.5 Special protective equipment - Not applicable

6 ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Limit dust formation, use disposable (P2 as a minimum) dust protection mask

6.2 Environmental precautions

No special measures required

6.3 Methods and material for containment and cleaning up

Pick up mechanically and dispose of in accordance to regulations

6.4 Reference to other sections

See also section 7 and 8.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Minimize dust formation

Precautions against fire and explosion — No danger of fire and dust explosion

7.2 Conditions for safe storage, including any incompatibilities

Conditions of storage rooms and vessels — No special precautionary measures

Advice of storage of incompatible materials — None

Further information of storage — None

7.3 Specific end use(s)

Not applicable

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Components with specific control parameters as limit values

	8 hours TWA (mg / m^3)	
	Inhalable (total) dust	***Respirable dust***
France	10	5
Germany	10	3
USA (ACGIH)	10	3

Additional national exposure limit values have to be taken into consideration.

8.2 Exposure controls

Further information for system design and engineering measures	Use engineering controls to ensure compliance (implies air monitoring strategy, proper selection of air sampling equipment and statistical analysis of dust levels) with applicable dust exposure limits.
Personal protection equipment	
General hygiene	Observe standard hygiene practices (e.g. do not eat or drink at the workplace, comply with smoking rules in the company).
Respiratory protection	Avoid inhaling the dust; if in specific circumstances, compliance cannot be achieved, use a disposable (P2 as a minimum) dust protection mask.
Hand protection	Protective gloves are recommended.
Eye protection	Wear safety glasses.
Environmental exposure controls	See section 6 and 7. No further measures required.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	……..	Grains, powder
Colour	……..	Green, dark green, black
Odour	……..	Odourless
Change in physical state	……..	Not in normal condition of use
Flash point	……..	Not applicable
Flammability	……..	Not applicable
Ignition temperature	……..	Not applicable
Autoflammibility	……..	Not applicable
Oxidizing properties	……..	Not applicable
Explosive limits	……..	Not applicable
Specific gravity	……..	approx. 3.2g/cm^3
Bulk density	……..	1000-1700 kg/m^3
Solubility in water	……..	Practically non soluble
PH value	……..	Not applicable
Partition coefficient n-octanol/water	…..…	Not applicable

10 STABILITY AND REACTIVITY

10.1 Reactivity ..... No reactivity hazards
10.2 Chemical stability ..... The material is stable
10.3 Possibility of hazardous reactions ..... No hazardous reactions known
10.4 Conditions to avoid ..... Not applicable
10.5 Incompatible materials ..... Not applicable
10.6 Hazardous decomposition products..... Not applicable

11 TOXICOLOGY INFORMATION

11.1 Information on toxicological effects
General information ..... No hazardous effects known, if used under normal conditions

"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/m³ for inhalable particles, and 3mg/m³ for respirable particles." (ACGIH Toxicology review 2001).

(a) acute toxicity ..... no harmful effects identified, based on available data
(b) irritation ..... no harmful effects identified, based on available data
(c) corrosivity ..... no harmful effects identified, based on available data
(d) sensitisation ..... no harmful effects identified, based on available data
(e) repeated dose toxicity ..... no harmful effects identified, based on available data
(f) carcinogenicity ..... no harmful effects identified, based on available data
(g) mutagenicity ..... no harmful effects identified, based on available data
(h) toxicity for reproduction ..... no harmful effects identified, based on available data

12ECOLOGICAL INFORMATION

12.1 Toxicity ..... no harmful effects identified, based on available data
12.2 Persistence and degradability.....chemically inert and insoluble in water; separation by mechanical processes (sedimentation, filtration, etc…)
12.3 Bioaccumulative potential ..... no potentials known
12.4 Mobility in soil ..... no environmental problems known
12.5 Results of PBT and vPvB assessment ..... no PBT or vPvB substance
12.6 Other adverse effects ..... no environmental problems expected, if handled and treated in accordance with standard industrial practice

13 DISPOSAL CONSIDERATION

13.1 Waste treatment methods

Material Not classified as hazardous waste; observe local bye-laws.

Packaging Packaging has to be emptied entirely; recycling of used packaging is recommended; local bye-laws must be considered

14 TRANSPORT INFORMATION

14.1 UN number
Not applicable, non hazardous material

14.2 UN proper shipping name
Not applicable, non hazardous material

14.3 Transport hazard class(es)
Not applicable, non hazardous material

14.4 Packing group
Not applicable, non hazardous material

14.5 Environmental hazards
Not applicable, non hazardous material

14.6 Special precautions for user
Not applicable, non hazardous material

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable, non hazardous material

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
SiC is not classified as a hazardous substance.
Labelling according to 67/548/EEC and 1999/45/EC is not required.

15.2 Chemical Safety Assessment
Not relevant

16 OTHER INFORMATION

Further Information sources:

ACGIH review
British Journal of Industrial Medicine :
1993, vol. 50, issue 9, part 1, pages 797-806
1993, vol. 50, issue 9, part 2, pages 807-813

Abbreviations:
TLV-TWA : Threshold Limit Value-Time Weighted Average (8 hours)
ACGIH : American Conference of Governmental Industrial Hygienists
PNOS : Particles Not Otherwise Specified

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The product specification is contained in a separate product technical data sheet.