SAINT-GOBAIN
GRAINS & POWDERS

MATERIAL SAFETY DATA SHEET

ACCORDING TO 91/155 EEC AND ISO - STANDARD 11014

SILICON CARBIDE (SiC)

SIKA

1- IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

1.1	Identification of the substance or preparation:	Silicon Carbide – SiC
	Commercial product name:	SIKA ABR, SIKA TECH, SIKA REF Grains and Powders
1.2	Manufacturer:	Saint-Gobain Ceramic Materials AS Arendal and Lillesand plants
	Distributer:	As above
	Street address:	Po. Box 113 , N-4792 Lillesand**.**
	Country:	NORWAY
	Telephone:	+ 47 37 05 55 55
	Telefax:	+ 47 37 26 01 50
	Emergency phone:	+ 47 37 26 02 68
	Department responsible for information:	Quality Department

2- COMPOSITION / INFORMATION ON INGREDIENTS

Contains SiC (CAS No. 409-21-2) in the:	97,5-99,9 % range
May also contain:	C, Si,Fe_2O_3,CaO,MgO,traces of crystaline silica.

3-HAZARDS IDENTIFICATION

No specific toxicity described for SiC grains.
SiC is not an officially listed hazardous substance.
ACGIH is treating SiC as “insoluble or poorly soluble particles not otherwise specified (PNOS)”.
Cristalline silica proportion is less than % SiO_2 measured.

4-FIRST AID MEASURES

4.1	Inhalation:	No special action required
4.2	Skin contact	No special action required. Mechanical irritant; prolonged contact may cause skin abrasion; seek medical attention if needed.
4.3	Eye contact	Flush with plenty of clean water. Mechanical irritant; prolonged contact may cause tearing and redness; Seek medical attention if irritation persists
4.4	Ingestion:	No special action required

5-FIRE FIGHTING MEASURES

5.1	General information:……..	Not inflammable
5.2	Suitable extinguishing media:……..	Use extinguishing measures appropriate to the source of the fire
5.3	Extinguishing media which must not be used for safety reasons:……..	None known

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

5.5 Special protective equipment:…….. Not applicable

6-ACCIDENTAL-RELEASE MEASURES

6.1 Personal precautions:…… Limit dust formation, use disposable (P2 as a minimum) dust protection mask.

6.2 Environmental precautions:…….. No special measures required

6.3 Methods for cleaning up:…… Pick up mechanically and dispose of in accordance to regulations

7-HANDLING AND STORAGE

7.1 Handling

Precautions for safe handling:…….. Limit dust formation

Precautions against fire and explosion:……. No danger of fire and dust explosion

7.2 Storage

Conditions of storage rooms and vessels:……. No special precautionary measures

Advice of storage of incompatible materials:…. None

Further information for storage:…… None

8-EXPOSURE CONTROLS - PERSONAL PROTECTION

8.1 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.

8.2 Components with specific control parameters as limit values: See below examples of exposure limits:

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

8.3 Personal protection equipment

General hygiene: Observe standard industrial hygiene practice (ex: don't eat or drink on the job, comply with smoking rules in the Company)

Respiratory protection: Avoid inhaling dust. If in specific circumstances compliance cannot be achieved, use a disposable (P2 as a minimum) dust protaction mask. Fine-dust mask with category P1 filter must be used if fine dust limits are exceeded.

Hand protection: Protective gloves are optional.

Eye protection: Safety glasses are strongly recommended.

9-PHYSICAL AND CHEMICAL PROPERITES

9.1	Appearance:	
	Form:	Grains, powders
	Colour:	Green, Black
	Odour:	Odourless
9.2	Physical-chemical properties	
	Change in physical state:	Not in normal condition of use.
	Flash point:	Not applicable
	Flammability:	Not applicable
	Ignition temperature:	Not applicable
	Autoflammability:	Not applicable
	Oxidizing properties:	Not applicable
	Explosive properties:	Not applicable
	Explosive limits:	Not applicable
	Vapour pressure:	Not applicable
	Specific gravity:	approx. 3,2 g/cm3
	Bulk density:	(700 - 1700) kg/m3
	Solubility in water:	Practically insoluble
	pH-value:	Not applicable
	Partition coefficient n-octanol/water:	Not applicable
9.3	Dustines	Dustinness of this SiC product has been classified According to 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 in normal condition.

"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).

11.2 Acute toxicity: No harmful effect is anticipated.

12-ECOLOGICAL INFORMATION

12.1	Information on elimination, persistence and degradability:	Chemically inert and insoluble in water. Separation by mechanical processes (sedimentation, filtration etc.)
12.2	Behaviour in environmental compartments:	No environmental problems known
12.3	Ecotoxicity:	No harmful effects on water organism anticipated
12.4	Further ecological Information:	No environmental problems expected, if handled and treated in accordance with standard industrial practice

13-DISPOSAL CONSIDERATIONS

13.1	Material:	Not classified hazardous waste. Observe local bye-laws
13.2	Packaging:	Packaging has to be empted entirely. Recycling of used packaging is recomended. Local bye-laws must be observed.

14 TRANSPORT INFORMATION

14.1	Land transport:	
	GGVS / ADR	Non hazardous material
	GGVS / RID:	Non hazardous material
14.2	Inland waterways:	
	GGVBisch/ ADNR	Non hazardous material
14.3	Maritime transport:	
	GGVSee / IMDG	Non hazardous material
14.4	Air transport:	
	ICAO-TI / IATA	Non hazardous material

15 REGULATORY INFORMATION

15.1	Toxicological classification	SiC is not classified as an hazardous substance
15.2	Labelling	According to common label for SiCMa companies.

16 FURTHER INFORMATION

ACGIH review
British Jounal 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.