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according to Regulation (EC) No. 1907/2006
Date of issue: 22/04/2013 Revision date: 07/05/2014

SILICON CARBIDE Safety Data Sheet

1- IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Identification of the substance or mixture:	Silicon Carbide
Commercial product name:	CARBOREX Silicon Carbide
Registration number:	01-2119402892-42-0012

1.2 Relevant identified uses of the substance or mixture and uses advised against

Lapping and Polishing - Wire Sawing - High Tech Ceramics - Refractory - Metallurgical.

No uses of Silicon Carbide advised against

1.3 Details of the supplier of the safety data sheet

Supplier	Keramikos Oudeweg 153 2031 CC Haarlem
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Country	The Netherlands
Telephone	023 – 542 44 16

E-mail	info@keramikos.nl
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1.4 Emergency telephone number

023 – 542 44 16



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2- HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

SiC is not classified as dangerous substance or mixture according to Council Directive 67/548/EEC or Directive 1999/45/EC or Regulation (EC) No 1272/2008.

2.2 Label elements

No labelling required for CLP regulations 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- COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Contains SiC (EC N°: 206-991-8, CAS# 409-21-2) in the range 60-99,2 % SiC.

(not classified according to directive 67/548/EEC and Regulation (EC) N° 1272/2008)

4- 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

4.3 Indication of any immediate medical attention and special treatment needed No specific treatment required

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5- FIREFIGHTING MEASURES

5.1 Extinguishing media

General information

Not inflammable

Suitable extinguishing media Extinguishing media not to be used for safety reasons

Use extinguishing measures appropriate to the sources of the fire

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

6- ACCIDENTAL 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.

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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

8.1 Control parameters

Components with specific control parameters as limit values for silicon carbide.

	8 hours TWA (mg / m ³)	
	Inhalable (total) dust	Respirable dust
Norway	10	5
France	10	5
Germany	10	3
USA (ACGIH)	10	3
UK	10	4

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).



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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 |
| Autoflammability | Not applicable |
| Oxidizing properties | Not applicable |
| Explosive limits | Not applicable |
| Specific gravity | approx. 3.2g/cm ³ |
| Bulk density | 500-1700 kg/m ³ |
| Solubility in water | Practically non soluble |
| PH value | Not applicable |
| Partition coefficient | Not applicable |
- 9.2 Other information
- Dustiness according to EN 15051 standard
In the scope of the REACH registration dossier measurements were performed on a representative sample with the conclusion that the proportion of respirable dust was always less than 0.1 %.

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



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Not applicable

10.5 Incompatible materials
Not applicable

10.6 Hazardous decomposition products
Not applicable

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11-TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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).

Acute toxicity: no harmful effects identified based on available data

Irritation: no harmful effects identified based on available data

Corrosivity: no harmful effects identified based on available data

Sensitisation: no harmful effects identified based on available data

Repeated dose toxicity: no harmful effects identified based on available data

Carcinogenicity: no harmful effects identified based on available data

Mutagenicity: no harmful effects identified based on available data

Toxicity for reproduction: no harmful effects identified based on available data

12-ECOLOGICAL 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 v P v B a s s e s s m e n t



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n o P B T or v P v B s u b s t a n c e

12.6 Other adverse effects no environmental problems expected, if handled and treated in accordance with standard industrial practice

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13-DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

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

Packaging: Packaging has to be emptied entirely; recycling of used packaging is recommended; local by-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.



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Labelling according to 67/548/EEC and 1999/45/EC is not required.

15.2 Chemical Safety Assessment
Not relevant



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16-OTHER INFORMATION

Labelling of SiC Products

Members of SiCMA have established on a voluntary basis a label which summarizes the main safety and health aspects related to the handling of SiC products. The label is attached as Annex 1 to this SDS. 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

Disclaimer :

To the best of our knowledge, the information contained in this SDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

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



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Annex 1 – voluntary SiC_Ma label
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English	Français	Deutsch	Español	中文
Wear safety glasses; wash with large amount of water in case of eyes contact.	Utiliser des lunettes de sécurité; laver à grande eau en cas de contact oculaire.	Sicherheitsbrille tragen; Nach Augenkontakt mit viel Wasser auswaschen.	Utilizar gafas de seguridad. Lavar los ojos con abundante agua en caso de contacto ocular.	请佩戴防护眼镜；万一眼中注入了碳化硅请用大量清水进行冲洗。
Protective gloves are recommended.	Les gants de protection sont recommandés.	Schutzhandschuhe werden empfohlen.	Se recomienda el uso de guantes.	请佩戴防护手套。
Minimize dust generation when handling & processing; comply with applicable dust exposure limits; if necessary use local exhaust ventilation and respiratory protection.	Eviter la production de poussières; se conformer aux valeurs limites d'exposition; si nécessaire utiliser la ventilation locale et la protection respiratoire.	Staubzeugung während der Handhabung u. Verarbeitung vermeiden; die gültigen Staubbelastungsgrenzen einhalten; wenn nötig lokale Absaugventilatoren und Atemschutz verwenden.	Evitar la generación de polvos; cumplir con los límites de exposición para polvos. Si fuese necesario, utilizar ventilación y protección respiratoria adecuada.	在搬运和加工过程中请尽可能减少灰尘产生；不同工作现场应遵循与工作现场相适应的有关粉尘暴露限制规定；如果需要，请尽量使用移动通风排气装置，佩戴防护口罩。
Products may contain traces of respirable crystalline silica far below the 0.1% regulatory limit.	Ce produit peut contenir des traces de silice cristalline alvéolaire, bien en dessous du seuil réglementaire de 0.1%.	Produkte können Spuren weitaufabdes vorgeschriebenen Grenzwertes von 0.1% der einatmbaren Kristalline Kieselsäure enthalten.	Los productos pueden contener trazas de sílice cristalina respirable por debajo del límite admisible del 0,1%.	产品可能含有微量可吸入的低于正常规定0.1%的硅粉。
Refer to Material Safety Data Sheet (MSDS).	Consulter la Fiche de Données de Sécurité.	Siehe Sicherheitsdatenblatt.	Consultar las hojas de seguridad del material.	参见产品的相关化学品安全技术说明书。

