



ESD-SiC bv

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Product: Silicon Carbide (SiC)

version: 3.0  
revision: 15/05/2020  
printing date - 15/05/2020

# Safety Data Sheet

## Silicon Carbide (SiC)

according to Regulation (EC) No 1907/2006

Commercial product name: REFSiC, TOPSiC, ESiC and SiC-lumps

### **Section 1- Identification of the substance/mixture and of the company/undertaking**

#### **1.1 Product identifier**

Product name:	Silicon Carbide
Commercial product name	REFSiC, TOPSiC, ESiC and SiC lumps (Metallurgical SiC)
Registration number	01-2119402892-42-0002

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

REFSiC, TOPSiC, ESiC and SiC lumps:	Metallurgical (e.g. alloys, deoxidisation, pre- treatment of cast iron and steel)
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No uses of silicon carbide advised against.

#### **1.3 Details of the supplier of the safety data sheet**

Manufacturer	ESD-SiC bv.
Distributor (if applicable)	ESD-SiC bv.
Street address :	Kloosterlaan 11-13
Place	9936 TE Farmsum
Country	NETHERLANDS
Telephone – Telefax	0031 596 637 222 / 610 738
Department responsible for technical information	QESH (0031 596 637 217)
E-mail of competent person	k.mulder@esd-sic.nl

#### **1.4 Emergency telephone number 0031 596 637 245 / 246 (24h/day)**





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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

## **Section 5- FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

General information Not inflammable

Suitable extinguishing media Use extinguishing measures appropriate to the sources of the fire

Extinguishing media not to be 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 fire fighters**

Special protective equipment Not applicable

## **Section 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**



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Pick up mechanically and dispose of in accordance to regulations

## 6.4 Reference to other sections

See also section 7 and 8.

## **Section 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

## **Section 8- EXPOSURE CONTROLS / PERSONAL PROTECTION**

### 8.1 Control parameters

Components with specific control parameters as limit values

substance	CAS-N°	EC-N°	Limit value type (country of origin)	Occupational limit value				Peak limit	source, remark
				Long term		Short term			
				mg/m <sup>3</sup>	ml/m <sup>3</sup> (ppm)	mg/m <sup>3</sup>	ml/m <sup>3</sup> (ppm)		
Silicon Carbide, Inhalable fraction	409-21-2		WEL UK	10				EH40/2005 Workplace exposure limits	
			OELV Ireland	10				Chemical Agents Code of Practice	
Silicon Carbide, respirable	409-21-2		WEL UK	4				EH40/2005 Workplace exposure limits	



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fraction			OELV Ireland	3				Chemical Agents Code of Practice	
Dusts non-specific, Inhalable fraction			OELV Ireland	10				Chemical Agents Code of Practice	
Dusts non-specific, respirable fraction			OELV Ireland	4				Chemical Agents Code of Practice	
Dusts non-specific, Inhalable fraction			OELV Netherlands	10				Sociaal Economische Raad (SER)	
Dusts non-specific, respirable fraction			OELV Netherlands	5				Sociaal Economische Raad (SER)	

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



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### **Section 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 <sup>3</sup>
Bulk density	1000-1800 kg/m <sup>3</sup>
Solubility in water	Practically non soluble
PH value	Not applicable
Partition coefficient n-octanol/water	Not applicable

#### **9.2 Other information**

Respirable dustiness according to EN 15051 standard	< 0,1 % m/m (grainsize 0-0,1 mm SiC) < 0,01% (larger grain sizes)
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## Section 10- STABILITY AND REACTIVITY

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

## Section 11- TOXICOLOGICAL INFORMATION

<b>11.1</b>	<b>Information on toxicological effects</b>	
	General information	No hazardous effects known, if used under normal conditions
	(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



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### **Section 12- ECOLOGICAL INFORMATION**

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

### **Section 13- DISPOSAL CONSIDERATIONS**

<b>13.1 Waste treatment methods</b>	
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.

### **Section 14- TRANSPORT INFORMATION**

<b>14.1 UN number</b>	Not applicable, non hazardous material
<b>14.2 UN proper shipping name</b>	Not applicable, non hazardous material
<b>14.3 Transport hazard class(es)</b>	Not applicable, non hazardous material
<b>14.4 Packing group</b>	Not applicable, non hazardous material
<b>14.5 Environmental hazards</b>	Not applicable, non hazardous material
<b>14.6 Special precautions for user</b>	Not applicable, non hazardous material
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable, non hazardous material





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### **Section 15- REGULATORY INFORMATION**

- |  |   |
|--|---|
| <b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b> | SiC is not classified as a hazardous substance. Labelling according to Regulation (EC) N°1272/2008 is not required. |
| <b>15.2 Chemical Safety Assessment</b>   | Not relevant  |

### **Section 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 :*

ACGIH American Conference of Governmental Industrial Hygienists

WEL Workplace exposure limits

OELV Occupational Exposure limit value

##### *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<sub>Ma</sub> label

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; 万一眼中浸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灰尘泄露限制规定; 如果必要, 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 weit unterhalb des vorgeschriebenen Grenzwertes von 0,1% der anatembaren Kristallein 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。