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1. Identification of the substance/preparation and company

Product details:

Trade name:

®SIGRACET - gas diffusion media (GDL)
all types with index AA

Application:

Employment in fuel cell.

Producer / supplier details:

Producer/supplier:

SGL TECHNOLOGIES GmbH
Werner-von-Siemens-Str. 18 D-86405 Meitingen
Phone: ++49-8271-83-0 Fax: ++49-8271-83-2127

Information providing division:

SGL TECHNOLOGIES GmbH - Meitingen plant
Werner-von-Siemens-Str. 18 D-86405 Meitingen
Phone: ++49-8271-83-2426 Fax: ++49-8271-83-2243

Information in case of emergency:

SGL TECHNOLOGIES GmbH - Meitingen plant
Phone: ++49-8271-83-1200 Fax: ++49-8271-83-2466

2. Composition/information on ingredients

Chemical characteristics:

Product/material based on carbon.

Hazardous ingredients:

none acc. to 67/548/EEC.

Additional information:

None

3. Possible Hazards

Information on particular hazards to human and environment:

Carbon fibers are electrically conductive and may cause a short circuit in electrical equipments.
Improve level of electrical protective measure. IP54 is demanded.

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4. First aid measures

General information:

None.

On inhalation:

After inhalation of greater quantities of dust, take affected person to fresh air.

On contact with skin:

After handling fibers wash skin with soap and water. Fibers may cause skin irritation.

On contact with the eyes:

Rinse with plenty of water.

If swallowed:

Drink water

Particular advices for the physician:

None.

5. Fire-fighting measures

Suitable extinguishing media:

Foam, carbon dioxide, dry powder, water spray jet.

Unsuitable extinguishing media, for safety reasons:

Direct water spray jet.

Particular risks arising from the substance, its preparation, its products of combustion or formed gases:

Fiber or dust may glow in oxygen containing atmosphere above 350°C.

During glowing and in case of fire CO/CO₂ is generated, as well as the release of organic decomposition products is possible.

Special protection equipment needed for fire-fighting:

None, in case of insufficient ventilation use respiration equipment (against CO/CO₂).

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6. Measures in case of accidental release

Personal precautions:

In case of dust release use protective mask (P1).

Environmental precautions:

None.

Methods for cleaning/removal:

Remove mechanically

Additional information:

None.

7. Handling and storage

Handling:

Advice on safe handling:

None.

Advice on protection against fire and explosion:

Remove fine dust regularly.

Storage:

Requirements on storage areas and tanks:

Dry, beware of humidity.

Advice on storage assembly:

None.

Additional information on storage conditions:

None.

Storage class:

Not classified.

8. Exposure limitations and personal protection equipment

Measure for limitation and monitoring the exposure:

Take care for good ventilation of the working area

Additional advice on the design of technical equipment:

None.

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8. Exposure limitations and personal protection equipment (cont.)

Ingredients with occupational exposure limits to be monitored:

CAS-No.	Name of substance	Type	Value	Unit
None.				

Additional advices:

None.

Personal protective equipment:

General protective and hygiene measures:

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

Respiratory protection:

Dust protective mask (P1), if dust is formed.

Hand protection:

Textile gloves

Eye protection:

Tight closing safety glasses, if dust is formed.

Body protection:

None

9. Physical and chemical properties

Appearance:

Form:	solid
Colour:	grey/black
Odour:	none

Data relevant to safety:

Parameter	Value/range	Unit	method
Softening point:	inapplicable		
Boiling point/range:	inapplicable		
Melting point/range:	inapplicable		
Flash point:	inapplicable		
Ignitability:	inapplicable		
Ignition temperature:	inapplicable		
Self ignitability:	none *)		
Inflammable properties:	none		
Explosive risk:	none *)		

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9. Physical and chemical properties (cont.)

Data relevant to safety:

<u>Parameter</u>	<u>Value/range</u>	<u>Unit</u>	<u>method</u>
Explosion limits:	upper		inapplicable
	lower		inapplicable
Vapour pressure at 20°C:			inapplicable
bulk density at 20°C:	1.8	g/cm ³	
Solubility at 20°C:	none	(in water)	
pH-value:			inapplicable
Partition coefficient: n-octanol/water			inapplicable
Viscosity:			inapplicable
Additional information:			Carbon fibers are electrically conductive

Remarks:

*) if properly used and stored

10. Stability and reactivity

Conditions to be avoided:

None.

Contact with substances to be avoided

None.

Hazardous decomposition products:

None, if handled in accordance with description.

Additional information:

None.

11. Toxicological information

No toxicological data available.

Diameter of the fibers approx. 7 µm, do not fibrillize.

12. Ecological information

No ecological data available.

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13. Disposal consideration

Product/preparation:

Disposal in accordance with EC Directive 91/692/EEC.

Contaminated packing material:

Disposal in accordance with EC Directive 91/692/EEC.

14. Transport information

No hazardous material as defined by the transport regulations.

15. Regulations

Labelling according to EC regulations:

Code-letter and hazard-symbol for the product:

No subject to mandatory marking.

Hazardous ingredient(s) relevant for labelling:

None.

R-phrases:

None.

S-phrases:

None.

Additional classification acc. to GefStoffV (D) Appendix II:

None.

Regulations for handling restrictions:

None.

National regulations

Hazardous industries directive:

None.

Classification acc. to BetrSichV (D):

None.

Technical guideline "TA-Luft" (D):

Not applicable.

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15. Regulations (continued)

Hazard classification for water (D):

Not hazardous for water.

Other regulations, restrictions and prohibition regulations:

None.

16. Other informations

Other informations:

None

Safety data sheet providing division:

Meitingen plant / Safety & occ. health division

Person to contact:

Dr. R. Meyer zu Reckendorf Phone: ++49-8271-83-1512

This information is based on our present state of knowledge and is intended to describe our products in respect of safety requirements. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for particular application. This information does not form part of any contractual agreement in law.