

# Safety Data Sheet

## according to EC Directive No. 1907/2006

Trade name : smartcel™-sensitive

Date revised : 06.10.2009

Version : 1.0. EN

Date printed : 07.10.2009

Specification : staple fibre

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### 1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

**1.1 Identification of substance/preparation :** smartcel™-sensitive staple fibre made from a cellulose-zinc white compound

**1.2 Application of substance/preparation :** semi-finished good intended for permanent skin-care equipment of textile fabrics made up as blended fibre

**1.3 EC-Market Authorisation Holder (Manufacturer/Importer/Dealer):**

**smartfiber AG**  
**Breitscheidstrasse 154**  
**D-07407 Rudolstadt**

**Telephone:** +49 (3672) 34 94-0  
**Telefax:** +49 (3672) 34 94-34  
**E-Mail :** [mail@smartfiber.de](mailto:mail@smartfiber.de)

**1.4 Emergency call number**

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**Breitscheidstrasse 154**  
**D-07407 Rudolstadt**

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### 2. HAZARDS IDENTIFICATION

This product may not be classified as hazardous material according to EC-criteria and does not represent a potential health hazard.

The product contains zinc oxide (CAS-No. 1314-13-2). Ensure sufficient ventilation or air-conditioned environment when processing fibres in order to avoid exceeding maximum allowable working place concentration.

Accumulation of fibre dust or flue may cause fire hazard in presence of sources of ignition and at higher local concentrations.

Combustible, no labelling required.

No dangerous product according to guideline 67/548/EWG.

Product is not carcinogenic, mutagenic or teratogenic.

Release of hazardous ingredients without external influence can be excluded.

Mechanical load or water contact may release such ingredients, whose low content in product is negligible in practical application. Waste waters from

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subsequent washing steps formed at processing the material for final products has to be fed to corresponding water treatment plant.

Based on current state of knowledge and when used properly, product is not expected to cause any hazards to user.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Staple fibre made from regenerated cellulose  $(C_6H_{10}O_5)_n$  of different fibre fineness and staple length, modified with zinc oxide as functionalising agent.

CAS : 9004-34-6 Cellulose

Additional ingredients :	Zinc oxide	< 20 %
	Finisher	< 1 %
	Water	< 12 %

The cellulose-zinc oxide-compound is non-toxic. In case of application for special purposes, e.g. in food industry, hygiene sector, medical or surgical uses, please refer to the manufacturer first of all. If applied as directed no negative health effects have been observed.

Product may contain up to 1 % finisher for improving textile processability.

These finishers can be removed by washing processes when necessary or wear off by itself when in use.

The product contains water being in equilibrium with the ambient air humidity.

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### 4. FIRST AID MEASURES

- 4.1 General remarks :** clean contaminated clothing mechanically
- 4.2 After inhalation:** supply fresh air, consult physician when respiratory system is irritated
- 4.3 After skin contact :** Product does not irritate skin.
- 4.4 After eye contact:** Remove contact lenses. Rinse with water at eye lid wide open, consult physician when necessary.
- 4.5 After swallowing:** may lead to constipation.

Recommendation for physician at problems caused by additive dust:

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Due to low solubility of the salt neither local irritation, nor reabsorption effects are likely to occur. Mechanical irritation effects caused by dusts are the only impairments to be considered in this connection.

– Remarks on First Medical Aid:

Rinse affected eyes with water or physiological NaCl-solution. Remove particles with cotton buds when needed. Consulting eye specialist for subsequent inspection is recommended.

– Further treatment, symptomatic if it applies:

In case of oral uptake, especially of higher quantities, the application of roughage and a laxative is sufficient.

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## 5. FIRE-FIGHTING MEASURES

### **Suitable extinguishing media**

All common extinguishing media

### **Non-suitable extinguishing media**

Water at electrical spark formation and full water jet

### **Special hazard by material or composition itself, its combustion products or released gases**

Hazardous smoke or gasses can be formed in case of fire. Carbon monoxide, Carbon dioxide

### **Special protective equipment for fire fighting**

Self-containing breathing apparatus required in closed rooms.

### **Additional remarks:**

Burning solid not self-extinguishing. Thermal decomposition of product ingredients at temperatures > 175°C under formation of ignitable, combustible gasses. The product does not melt or plasticises and forms residues after thermal decomposition.

Accumulation of fibre dust and flue in higher concentration may cause fire hazards. Keep away sources of ignition. Pay attention to electrostatic charging.

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### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions:

Not necessary

#### 6.2 Environmental precautions:

Fed waste water containing finisher ingredients to waste water treatment plant

#### 6.3 Methods for cleaning up:

Take up material mechanically and in dry state and recycle. No hazardous waste in accordance with disposal regulation (AVV).

Dispose waste under consideration of local official regulations if recycling turns out to be impossible.

#### 6.4 Additional remarks:

No release of hazardous substances.

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### 7. STORAGE AND HANDLING

#### 7.1 Handling:

Avoid fibre dust, fibre flue and decomposition products during preparation by ventilation and exhausting. Clean machines, working areas and –clothing periodically. Keep away sources of ignition and combustible substances. Pay attention to electrostatic charging.

##### 7.1.1 Remarks on safe handling:

No special measures required

##### 7.1.2 Technical measures to avoid dust formation:

Dust formation likely when using final product in dry state. Combustible cellulose particles are released beside material excavation. Maintain common regulations for reducing and avoiding dust load and uncontrolled dust deposition when handling combustible substances.

##### 7.1.3 Remarks on fire and explosion protection:

Keep away open sources of ignition.

#### 7.2 Storage:

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No specific requirements

### 7.2.1 Requirements for stores and tanks

No specific requirements

### 7.2.2 Information on clustering

Storage class 4.1 combustible solid

Do not store together with easily inflammable substances.

### 7.2.3 Further information on storage conditions:

Protect from temperatures exceeding 80 °C

Higher storage temperatures will lead to discolouration and deterioration in quality, as well as decrease in strength.

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## 8. EXPOSURE CONTROLS AND SUPERVISION/PERSONAL PROTECTION

### 8.1 Exposure limits for working places and /or biological exposure limits Exposure controls and personal protection

#### Maximum allowable working place concentration (AGW) Germany

Zinc oxide: CAS-No. 1314-13-2

Specification: TRGS 900, permissible exposition limit (D)

Value: 5 mg/m<sup>3</sup>, related to the alveolar action

Limiting maximum  
concentration:

Teratogenic: D – no classification

### 8.2 Exposure controls and supervision on the workplace

Technical measures and application of suitable working procedures as stated in chapter 7 take priority over the application of personal protection equipment. Permissible exposition limit is not expected to exceed when maintaining corresponding hygienic requirements regarding ventilation and exhaustion as well as prescribed exhaustion for avoiding fibre dust and flue.

### 8.3 Personal protection equipment:

#### 8.3.1 Respiratory protection

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Ensure sufficient ventilation. This might be maintained by local exhaustion or general ventilation systems (see chapter 7). It is recommended to wear face masks (P2 or P3) if implemented measures are not sufficient for preventing dust formation.

Further :

Face mask when larger quantities of fibres are processed as well as when needed, see chapter 5

### 8.3.2 Hand protection

No special requirements

### 8.3.3 Eye protection

Protection glasses with side shields or other appropriate protection measures, e.g. when cutting or splitting materials

### 8.3.4 Body protection

Safety boots when transporting packages, closed protective clothing

### 8.3.5 Exposure limits and supervision of environmental exposure

Retain fibre dust and flue by filter systems.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Appearance:** staple fibres with cutting length according to processing requirements (cutting machine settings)

**Form :** spinning fibre with circular single filament cross-section

**Colour:** natural white

**Odour:** odourless

### 9.2 Data relevant to safety

	Value	Method	Remark
pH-value (20°C)	N/A		
Melting point/-range (°C)	N/A		
Boiling point (°C)	N/A		
Ignition temperature (°C)	410°C		
Thermal decomposition	> 175°C		

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LOI	19-20%		
Steam pressure (°C)	N/A		
Density (g/cm <sup>3</sup> )	app. 2,1		
Apparent density (g/cm <sup>3</sup> )	N/A		
Solubility in water (at 20°C in g/L)	insoluble		
Coefficient of distribution n-octanol/water (log Pow)	N/A		
Viscosity, dynamic (mPa s at 20°C)	N/A		
Lower explosion limit	N/A		
Upper explosion limit	N/A		

### 9.3 Other data

Product does not melt or plasticises.

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## 10. STABILITY AND REACTIVITY

**10.1 Conditions to avoid:** temperatures above 80°C when stored in dry place

**Thermal decomposition point:** > 175°C

**Heat generation rate:** 17 MJ/kg

**Remark:** discolouration and loss of strength may occur when exposed to elevated temperatures for a longer time period

### 10.2 Incompatible materials

8-10 % soda lye leads to fibre swelling at room temperature. Fibre is also dissolved by hot diluted and concentrated acids.

### 10.3 Hazardous decomposition products

Carbon monoxide, carbon dioxide, low-molecular organic substances according to temperature and air supply.

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### 11. TOXICOLOGICAL INFORMATION

The product is non-toxic. In case of application for special purposes, e.g. in food industry, hygiene sector, medical or surgical uses, please refer to the manufacturer.

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### 12. ECOLOGICAL INFORMATION

At high concentrations zinc compounds will lead to biological hazard to aquatic organisms.

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### 13. DISPOSAL CONSIDERATIONS

Can be fed to landfill or suitable combustion plant under consideration of local regulations, respectively.

Recycling after consulting authorities according to waste code number (European Waste Catalogue)

<u>EAK-key</u>	<u>Name</u>
070299	waste

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### 14. TRANSPORT INFORMATION

No dangerous good according to transport regulations (ARD/RIDGGVSE), (IMDG-Code/GGVSea) and (ICAO-IATA/DGR) at temperatures < 80°C.

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### 15. REGULATIONS

#### 15.1 EC-Regulations

This product may not be classified as hazardous material according national and international regulations or laws, respectively.

##### 15.1.1 Labelling

According to EC-regulations the product is not subjected to accurate labelling.

##### 15.1.2 National regulations

Water Hazard Class

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### 16. OTHER INFORMATION

#### Relevant applicable EG-guidelines

Preparation Guideline (1999/45/EG), last revision by regulation (EG) No. 1907/2006

Material Guideline (67/548/EWG), last revision by guideline 2006/121/EG REACH-Regulation (EG) Nr. 1907/2006 (corrected version of 29.05.2007, ABI.L.136).

The present product is of technical quality and exclusively intended for industrial use if not specified or agreed otherwise. This covers the designated application fields and recommended concentrations. This especially applies to the use as products in public domains, which are prescribed by specific standards or laws. Other intended applications need to be agreed with the manufacturer.

Text of hazard warning symbols and R-phrases, as stated in chapter 2 for the applied additives with hazard potential:

Non

The manufacturer safety data sheet is intended for protecting man and environment by informing commercial users through appropriate information. It is not intended for private end users.

Additional risk potential arising from misappropriated use of the goods or caused by further additives are not content of this safety data sheet.

The data given above are based on current state of knowledge and do not represent an assurance of product properties. Existing laws and regulations have to be considered as consignees own risk.

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#### Revisions as against last version

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Department issuing data sheet

Product Development : Phone +49 (0) 3672 34 94 46

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