

**Data Sheet for Product Safety of Man Made Fibres \*)**

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 1 of 7

**Trevira® - CS and FR**

**1. Identification of the substance / mixture and of the company / undertaking:**

**1.1. Product identifier:**

- Name: Trevira® - CS and FR
- Description: Fibre products based on inherently flame-retardant modified Polyethylene terephthalate (PET) polymers
- CAS-No.: Confidential

**1.2. Identified uses:** Manufacturing of textile and technical products with inherently flame-retardant properties

**1.3. Supplier:** Trevira GmbH  
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**1.4. Information provided by:** Trevira GmbH, R & D / Product Safety  
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**2. Hazards identification:**

**2.1. Classification of the substance:**

Product is not classified as "dangerous substance" according to EC criteria.

**2.2. Label elements:**

Product does not need a hazard label element according to EC criteria.

**2.3. Other hazards:**

- Fibre dust/fly may cause irritations of the eyes and of the respiratory organ.
- Fibre dust/fly may represent a fire hazard at sufficient concentrations in presence of ignition sources.

**3. Composition / information on ingredients:**

**3.1. Composition:**

		<u>%</u>
- Polymer:		> 91.5
- Additives:	Titanium dioxide, dye-stuff (in case of need)	< 4.0
- Other components:	Textile processing aids	< 4.5

**Data Sheet for Product Safety of Man Made Fibres \*)**

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 2 of 7

**Trevira® - CS and FR**

**3.2. Information on ingredients:**

- Textile processing aids:

The fibre product may contain up to 4.5 % textile processing aids (e.g. spin finish, texturing / coning oil). These processing aids may generally be removed in an aqueous medium, if so required.

- Chemical characterisation of the polymer:

Polyethylene terephthalate (PET), modified with an organic Phosphorus component (co-monomer); Phosphorus proportion of modified PET: < 1 % (w/w).

**4. First aid measures:**

**4.1. Description of first aid measures:**

- Inhalation:

Inhalation of fibre fly, dust and finish decomposition products should be avoided by good hood suction and fresh air ventilation. In case of coughing or other symptoms the person should seek fresh air and - if necessary - see a physician.

- Skin contact:

Wash with soap and water. If irritation develops, consult a physician.

- Eye contact:

The eyes should be washed immediately with plenty of water. If irritation continues, consult a physician.

- Ingestion:

Do not induce vomiting. Call in a physician and show him the Data Sheet.

**4.2. Most important symptoms and effects, both acute and delayed:**

Unknown.

**4.3. Indication of any immediate medical attention and special treatment needed:**

No special advice.

**5. Firefighting measures:**

**5.1. Extinguishing media:**

All usual extinguishing media can be used.

**5.2. Special hazards arising from the substance:**

Hazardous burning / decomposition products: Oxides of Carbon (CO, CO<sub>2</sub>), oxides of Phosphorus and toxic low-molecular-weight organic compounds (e.g. aldehydes, organic acids, polymer fragments) depending on temperature and air supply.

**5.3. Advice for firefighters:**

Use self-contained breathing apparatus.

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 3 of 7

**Trevira® - CS and FR**

**5.4. Additional information:**

Collect and dispose of residues and contaminated fire water separately and according to local / national legislation. Do not allow them to enter drains and waterways or the soil.

**6. Accidental release measures:**

**6.1. Personal precautions, protective equipment and emergency procedures:**

Wear personal protective clothing. Do not inhale fibre dust/fly. Avoid skin and eye contact. Keep unprotected people away.

**6.2. Environmental precautions:**

Do not allow to enter drains or waterways or soils.

**6.3. Methods and material for containment and cleaning up:**

Pick up fibre product mechanically. Remove fibre dust by using a vacuum cleaner.

**6.4. Reference to other sections:**

Dispose of contaminated materials as waste according to section 13.

**7. Handling and storage:**

**7.1. Precautions for safe handling:**

Proper handling and processing does not require special technical protective measures. Avoid formation of dust and fibre fly!

Accumulation of fibre dust and fly may represent at sufficient concentrations a fire and explosion hazard. Remove ignition sources. Beware of electrostatic charges.

If subsequent processing involves the use of water, the waste water should be given the appropriate treatment in a purifying plant, in line with local regulations.

**7.2. Conditions for safe storage, including any incompatibilities:**

Bobbins / cartons / beams / bales must be stored in line with existing provisions. With regard to the fire load existing fire protection provisions have to be observed, i.e. proper fire protection measures have to be applied.

Protect product against dust, moisture, direct sunlight, electrostatic charges and ignition sources.

**7.3. Specific end use(s):**

Consult the manufacturer if the fibre product is to be used for special applications such as in the food industry, or in the hygienic, in the medical or surgical sector.

**8. Exposure controls / personal protection:**

**8.1. Controll parameters:**

**Data Sheet for Product Safety of Man Made Fibres \*)**

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 4 of 7

**Trevira® - CS and FR**

- In general:

Avoid accumulation of and contact with fibre dust/fly and decomposition products (released by polymer / textile processing aids at high temperatures) by a good functioning hood suction / sufficient fresh air supply and proper house keeping.

- Exposure limit values for dust:

Comply with national occupational threshold values for dust. According to TRGS 900 (Germany) there are two values:

a) 3 mg/m<sup>3</sup> - for fine dust (A-Staub – may penetrate alveoles)

b) 10 mg/m<sup>3</sup> - for coarse dust (E-Staub – respirable dust)

**8.2. Exposure controls:**

- Suitable technical measures:

See section 7.1.

- Personal protection measures:

+ Eye protection: safety glasses with side shields

+ Hand, skin and body protection: Wear impermeable protective clothing. Fibres that are processed at high speeds may cause abrasions or cuts. Appropriate protective measures have to be observed.

+ Inhalation protection: no special measurements required, except for fire or insufficient hood suction / fresh air supply (see section 8.1.).

+ Work place hygiene: continuously clean the working area by wet or vacuum cleaning in order to avoid the accumulation of fibre dust/fly. The general provisions on industrial work hygiene have to be observed. Do not eat, drink or smoke during work. Clean protective clothing regularly if contaminated with fibre dust/fly.

- Limitation of the environmental exposure:

Exhausted fibre dust/fly and decomposition products shall be kept back efficiently by adequate filter systems and disposed of according to local regulations / provisions.

**9. Physical and chemical properties:**

**9.1. Information on basic physical and chemical properties:**

*Appearance:* Staple fibre, tow; filament yarn (flat or textured, wound on bobbin or beam) – raw-white, white or dyed

*Smell:* odourless

*pH:* not applicable

*Melting range:* 240 - 250 °C

*Flash point:* no data available

*Ignition point:* no data available

*Oxidizing properties:* no data available

Data Sheet for Product Safety of Man Made Fibres \*)

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 5 of 7

**Trevira<sup>®</sup> - CS and FR**

*Vapour pressure:* not applicable  
*Specific gravity:* 1.3 – 1.4 g/cm<sup>3</sup> (at 20 °C)  
*Solubility in water:* insoluble

**9.2. Other information:**

*Solvent content:* none

**10. Stability and reactivity:**

**10.1. Reactivity:**

None under normal storage conditions.

**10.2. Chemical stability:**

Stable under normal storage and handling conditions.

**10.3. Possibility of hazardous reactions:**

None under normal storage conditions.

**10.4. Conditions to avoid:**

Temperatures above 300 °C (thermal degradation / decomposition).

**10.5. Incompatible materials:**

Strong oxidation agents. strong caustics and acids.

**10.6. Hazardous decomposition products:**

None under normal storage conditions.

**11. Toxicological information:**

No specific data on toxicology are available. To date, proper use of these fibre products has not been associated with a special hazard or any detrimental effects on health. In analogy to standard polyethylene terephthalate fibre products we expect that also *Trevira<sup>®</sup> - CS and FR* do represent only a minor health hazard:

Acute oral toxicity: none or only a minor toxicity is expected

Primary irritation effects:

- skin: none or only a weak irritation is expected

- eye: irritation caused by fibre dust/fly is expected

- respiratory organ: irritation caused by fibre dust/fly is expected.

**12. Ecological information:**

**Data Sheet for Product Safety of Man Made Fibres \*)**

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 6 of 7

**Trevira® - CS and FR**

No specific data on eco-toxicology are available. In analogy to standard polyethylene terephthalate fibre products we expect that also *Trevira® - CS and FR* do represent only a minor environmental hazard as the fibre products are in general insoluble in water, not readily biodegradable and mechanically separable.

Components of the textile processing aid may vaporize or decompose at temperatures above 130 °C.

If subsequent processing involves the use of water, the waste water should be given the appropriate treatment in a purifying plant, in line with local regulations.

**13. Disposal considerations:**

If recycling is not possible, the fibre product can be disposed of in a suitable refuse installation or incinerated subject to local regulations.

**14. Transport information:**

- Rail/Road (RID / ADR): not restricted
- Sea (IMO / IMDG): not restricted
- Air (ICAO/IATA): not restricted

**15. Regulatory information:**

**15.1. Safety, health and environmental regulations / legislation specific for the substance:**

- EU regulations: product is not classified as a dangerous substance  
product does not need a hazard warning label.

**15.2. Chemical safety assessment: none (product is not classified as dangerous)**

**16. Other Information:**

Data Sheet *Trevira® - CS and FR* (date of issue: 05.05.2010) and Data Sheet *Trevira® - CS- and FR-Filament, texturised* (date of issue: 05.05.2010) are replaced by this Data Sheet. Almost all chapters were completely revised.

This data sheet is intended to provide information about the physical properties, safety aspects, toxicological data and ecological characteristics which are relevant for the use of man made fibres in textile and industrial applications, and to recommend safe procedures for handling, storage and transport. Furthermore, it should also serve to provide industrial users of man made fibres with the appropriate information to protect both man and the environment.

**Data Sheet for Product Safety of Man Made Fibres \*)**

Date of issue:

18.01.2011

replaced issue: 05.05.2010

Page 7 of 7

**Trevira<sup>®</sup> - CS and FR**

This data sheet was not designed with the private end-user in mind. It is recommended that supplementary information is requested if an unusual application of this fibre product is intended.

The information given here is the best available to the author of this document on the date of issue. It does not constitute a contractual description of the product properties.

- \*) *Trevira<sup>®</sup> - CS and FR* is an article made of man made fibres and is not subject to European Regulation (EC) 1907/2006 on registration, evaluation and authorization of chemical substances (REACH). Safety Data Sheets or Chemical Safety Reports according to Art. 31 resp. Art. 14 of this regulation are therefore not required. This data sheet was established following Annex II of this regulation. The raw- and auxiliary materials used for the manufacturing of *Trevira<sup>®</sup> - CS and FR* are predominantly concerned by this regulation. Trevira will track the status of the registration and evaluation of these materials.