

# MATERIAL SAFETY DATA SHEET

In accordance with regulation (EC) 1907/2006 (REACH)

**E-Glass yarns, rovings, chopped fibers, filament fabrics, woven roving fabrics, chopped strand mats, combimats, multiaxial fabrics, 3-D woven fabrics, tapes**

Version 01: 12-4-2014

## 1. Identification of the product and of the company.

**1.1. Commercial name:** glass fibre product from E-glass

**Products:** glass roving, texturized roving, glass yarn, chopped glass fibre, woven filament fabric, woven roving fabric, chopped strand mat, combimat glass fabric, 3-D glass woven fabrics, tapes

**1.2. Use of the substance or preparation:**

- as reinforcement for plastics,
- for laminates and multi-layer composites production

**1.3. Identification of the company:**

*Company:* Compositesplaza B.V.  
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## 2. Hazards identification.

**2.1. For Human health:** Contact with glass fibre sometimes can cause irritation of the skin and rather rarely eyes, nose and throat pain. The E-glass fibre produced does not penetrate into organism by respiratory tract, due to the fact that its diameter exceeds 6  $\mu\text{m}$ , while 3  $\mu\text{m}$  is regarded the largest diameter of fibres with the ability of penetrating through respiratory tracts. Symptoms under excessive exposure: rash, itch, cough, sneezing. Investigations carried on for many years among people who worked in glass fibre production has not provided an argument that contact with glass fibre led to malignant or non-malignant sickness of respiratory system. Current examinations show that cancer occurrence is independent of work in the production of glass fibre. Also experiments on animals (inhaling glass fibres) has not proved carcinogenic effect of these fibres. The International Institute for Cancer (IARC) has classified continuous glass fibres to group 3, ie. as non-carcinogenic for people. Label classification EEC: No hazardous substances/preparations

**2.2. For environment:** The product is stable and non-flammable in normal industrial conditions. When exposed to long-lasting fire, dangerous products of burning can escape from size and binder, but content of size and binder in the product is small. In case of waste disposal, glass fibre should be classified as neutral, solid waste. It is not necessary to use special rules for its disposal and storage. Provisions of local law should be applied.

### 3. Composition/information on components.

	<b>mass fraction</b>
- glass fibre from E glass (product consist mainly from oxides of: silicon, aluminium, calcium, boron-creates amorphous glassy state)	min. 88 % - for mats min. 97,5 % . for others
- size/binder (complex compound of mixture consisting mainly of silicon and polymers)	0,4 - 2,25% - for roving, yarn and fabrics 3,0 - 12% - for mats

#### 3.1. Chemical characteristics:

Glass fibres are not liable to classification concerning "dangerous substances" in the meaning of 67/548/EEC standard. Glass fibres are neither specified under CAS numbers, nor under EPA code number. Glass and glass components of E glass are specified in EINECS under no 65997-17-3.

### 4. First aid measures.

- 4.1. **Inhalation:** if the irritation persists, consult a doctor.
- 4.2. **Contact with skin:** wash the affected place with lukewarm water and soap, if a fibre is stuck in the skin, ask for a doctor.
- 4.3. **Contact with eyes:** wash immediately the affected eye for 15 minutes with plenty of clean, running water - consult a doctor.
- 4.4. **Ingestion:** consult a doctor.
- 4.5. **Special materials needed for first aid:** none.

### 5. Fire fighting measures.

- product is non-flammable,
  - in case of long-lasting exposure to fire, there is a possibility that fire-induced products may escape from size and binder,
- |   |  |
|---|--|
| 5.1. <b>Recommended measures:</b>                 | not applicable,  |
| 5.2. <b>Non-recommended measures:</b>             | not applicable,  |
| 5.3. <b>Special risk resulting from material:</b> | none,  |
| 5.4. <b>Special means of protection:</b>          | in a case of longer contact with fire wear independent breath apparatus. |

### 6. Accidental release measures.

- Product does not cause environmental pollution.
- 6.1. **Recommended precautions:** no special precautions are recommended.
  - 6.2. **Means of environmental protection and cleaning:** the material should be disposed of as an inert solid waste according to local regulations.
  - 6.3. **Additional precautions:** the product should be handled as substance which is not absorbed by organism through respiratory tracts, but in contact may cause skin, nose and throat irritation.

## 7. Handling and Storage.

### 7.1. Handling.

#### 7.1.1. Advice for safe handling of product:

- no special precautions with respect to health and safety are required in the handling of product,
- product should be treated as substance which is not absorbed by organism through respiratory tracts, but in direct contact may cause irritation of skin, nose and throat.

#### 7.1.2. Protection against explosion: no danger of explosion.

### 7.2. Storage.

#### 7.2.1. Requirements as to place and manner of storage:

Products should be stored in a dry and closed area, to get optimal conditions; storage in temperature below 25°C and relative humidity below 65% is recommended.

#### 7.2.2. Other data concerned conditions of storage:

As glass fibre shows tendency to electrification, when the mass of fibre is sufficient, electrostatic discharge may occur.

## 8. Exposure control and personal protection.

### 8.1. Respiratory tract protection:

Usually is not necessary, but when the concentration of glass fibre in the air is above allowable limit value (as described in local regulations), for example while continuous chopping of glass fibre, respiratory tracts should be protected by dust-masks, because the dust can cause irritation. Suction ventilation, which pulls the dust outside the workplace, is also recommended. ACGIH Authorities of the United States have established allowable limit value of fibre contents in air, TLV (Threshold Limit Value). It was set at 10 mg/m<sup>3</sup> for the period of 8 hours. This value was accepted by most of the countries. There are fibres that can be inhaled (diameter below 3 µm), and those that cannot be inhaled. The products have only fibres above 6 µm, that cannot be inhaled.

**8.2. Hands protection:** to avoid skin irritation, protective gloves should be worn, protective cream may also be used.

**8.3. Eyes protection:** in case of processing which causes excessive dusting (for example chopping), protective glasses with side tabs should be worn.

**8.4. Body protection:** loose protective suit should be worn to prevent fibre contact with skin: shirts with cuffs, long trousers, etc.).

**8.5. Special means of protection and hygiene:** Observe usual personal hygiene.

## 9. Physical and chemical properties.

### 9.1. General information

**9.1.1. Appearance:** fibres in yellow to white colour connected in parallel strips.

**9.1.2. Odour:** odourless.

### 9.2. Important data related to safety:

**9.2.1. Boiling point (°C):** not applicable

**9.2.2. Ignition temperature (°C):** non-flammable

<b>9.2.3. pH value:</b>	not applicable
<b>9.2.4. Inflammability (EG A10/A13):</b>	non-flammable
<b>9.2.5. Ignition temperature:</b>	non-flammable
<b>9.2.6. Self-ignition:</b>	non-flammable
<b>9.2.7. Required properties:</b>	
<b>9.2.8. Explosive properties [% of vol.]</b>	not applicable
<b>9.2.9. Limits of explosion:</b>	not applicable
<b>9.2.10. Thermal decomposition [°C]</b>	not applicable
<b>9.3. Other data:</b>	
<b>9.3.1. Specific gravity of pure glass:</b>	approximately 2.55 g/cm <sup>3</sup>
<b>9.3.2. Solubility:</b>	not soluble in water, size and binding agents are soluble in styrene, acetone and methyl-ethyl-keton
<b>9.3.3. Partial pressure:</b>	not applicable
<b>9.3.4. Vapour density:</b>	not applicable
<b>9.3.5. Coefficient N-octanol/water:</b>	not applicable
<b>9.3.6. Littleton softening point:</b>	approximately
<b>9.3.7. Electrical conductivity:</b>	850°C E-glass is
<b>9.3.8. Contents of volatile matter:</b>	size and binder decomposition in high temperature: mats - max. 12 % other - max. 2,25 %
<b>9.3.9. Evaporation:</b>	depending on type of product, the maximum humidity content equals 0,25%.

## 10. Stability and reactivity.

- 10.1. Circumstances to avoid:** not known
- 10.2. Materials to avoid:** not known.
- 10.3. Dangerous products of decomposition:** in case of long-lasting exposure to fire, there is a possibility that fire-induced products may be released from size and binder (see point 5).

## 11. Toxicological information.

The products are not classified as "dangerous" in the meaning of seventh amendment to the 67/548/EEC standard.

**11.1. Severe toxicity:** direct contact with glass fibre can cause irritation of skin, and rarely, pain of eyes, nose and throat.

**11.1.1. Inhalation:** glass fibres can penetrate into human organism, mainly through respiratory tracts. Among fibres classified as able to penetrate into organism, are those with diameters below 3 µm. The products have only fibres with diameters equal or bigger than 6 µm, so they do not penetrate into organism. At the conference on toxicology held in Paris on 3-4 February 1994, it was reported that fibres which are not penetrating into organism cannot cause illnesses of respiratory tracts.

**11.1.2 Contact with skin:** glass fibre can cause irritation of the skin.

**11.1.3. Contact with eyes:** contact with glass fibre dust (particularly during glass fibre chopping) can cause eye irritation.

## **11.2. Effects of long-term exposure:**

### **11.2.1. Mutagenic and carcinogenic effects:**

Tests on animals exposed to glass fibres inhalation, did not show carcinogenic reactions. Tests in which glass fibres were injected into organisms of test animals, had led to cancer. Because no glass fibre is ever injected into human body, the results obtained in the tests were not classified as having any relation to humans. The International Institute for Cancer Research has classified continuous glass fibres into group 3, ie. as non-carcinogenic substance. This means, that there is not enough evidence to relate cancerous diseases to glass fibres.

### **11.2.2. Narcotic activity:** not detected

## **11.3. Human experience:**

Epidemiological investigations over many years on humans working in glass fibre production till the age of 40, did not allow to relate the increase in malignant and non-malignant respiratory tract diseases to the exposure to glass fibre.

## **12. Ecological aspect.**

Glass fibre is generally regarded as neutral to the environment, and should be treated as a neutral, solid waste. It is not necessary to use special rules for its disposal and storage. Local regulations should be obeyed. Glass fibre is not destructive to the ozon layer.

## **13. Consideration on disposal.**

**13.1. Reminders (wastes) of product:** dispose of as solid waste neutral to the environment

**13.1.1. Recommended:** observe local regulations

**13.1.2. Safe conditions:** no special requirements

**13.2. Dirty packagings:**

**13.2.1. Recommended:** observe local regulations

**13.2.2. Safe conditions:** as in the case of remainders of product

## **14. Transport regulations.**

No special rules and restrictions for transportation of the glass fibre products are applicable for land- inland waterways- marine- and airtransport.

Covered transport vehicles should be used.

## **15. Information on regulations.**

Important information, from legal point of view, is included in EINECS under number 65997-17-3.

Disposition (WE) European Parliament of 18 december 2006 REACH.

## **16. Other information.**

All information, recommendations and advice on the part of *Compositesplaza B.V.* are published to the best of our knowledge and belief. Any data given in this SAFETY DATA SHEET are typical values. Due to constant technical improvement of our products there may be changes to the characteristic values. Please check on a regular basis on our webshop if you still have the latest information.