

SAFE USE INSTRUCTIONS SHEET

Commercial product **powertex®**, **powertex® LE**, **powerfil®**, **E-Glas**, **powertex® S**, **basalt continuous**, **powermat® E**, **powermat®**, **powermat HT**, **powermat® S**, **powermat® S VT**, **powermat® E NGM**, **powerflex**, **powernet**



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02. HAZARDS IDENTIFICATION

With regard to its composition, this product is not classified as hazardous according to European Directive 67/548/EEC and 99/45/EC and their latest amendments.

This section identifies the potential hazards related to the article i.e. its shape, its dimensions and other Physical characteristics.

- Mechanical irritation (itching)
- Exposure to airborne dusts and fibers (inhalation)

For detailed explanation see section 11.

03. COMPOSITION/INFORMATION ON INGREDIENTS

Continuous filament glass fiber (CFGF) products are articles in the meaning of REACH (1907/2006/ER).

CFGF products are made of glass which is given a specific shape (filament) and dimension (filament diameter).

A surface treatment (sizing) is applied to the filaments which are gathered to form a strand. The strand is further processed into a specific product design according to the downstream use of the article. The sizing is a mixture of chemicals, i.e. coupling agent, film former and polymeric resin/emulsion. The sizing content is usually below 1% and in some specific case up to 2.5%. The sizing mixture basically consists of high molecular weight polymers not listed as dangerous substances (EINECS) nor in subsequent additions to the European List of New Commercial Chemical Substances (ELINCS).

For moulded products, based on CFGF a binder is applied in a secondary step to form the preform. The binder (polymeric resin) content is usually below 3% of the product weight.

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04. FIRST AID MEASURES

General information

Gently remove fibre from the respiratory tract resp from the skin and mucousae.

Inhalation

In case of upper respiratory tract irritation:

- Move to fresh air
- If symptoms persist, call a physician

Skin contact

In case of irritation:

- Wash off immediately with soap and cold water.
- DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers.
- DO NOT rub or scratch affected areas.
- Remove contaminated clothing.
- If skin irritation persists, call a physician

Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Have eye rinsing bottle available in case of potential hazard of eye contact, seek medical advice, if necessary.

05. FIRE-FIGHTING MEASURES

CFGF products are not flammable, are incombustible and do not support combustion.

Only the sizing and/or binder are combustible and could release small quantities of hazardous gas in case of major and prolonged heat or fire.

Suitable extinguishing media

Water, dry chemical, foam and carbon dioxide (CO₂)

Protective Equipment and Precautions for Fire-fighters

Wear self-contained breathing apparatus (SCBA) and full fire fighting protective gear

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08. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Information:

Continuous filament glass fibers are not respirable however certain mechanical processes might generate airborne dust or fibre (See section 11). The occupational exposure limits below mentioned are applicable to airborne fibre exposure and/or to dust exposure.

Exposure limit(s)

NOTE: The user of CFGF products has to comply with the national regulation in term of health worker protection. You will find below some occupational exposure limit values for some of European countries.

	Respirable Dust [mg/m ³]	Total dust [mg/m ³]	Respirable Fibre [fibre/ml]
ACGIH	3	10	1
Austria	6 (fine)		0,5
Denmark	5	10	1
Finland		10	1
France		10	1
Germany	3	4	0,25
Ireland	5		2
Italy	3	10	1
Netherlands	2	10	1
Norway	5	10	1
Portugal		4	1
Spain	3	10	1
United Kingdom	5	10	2

Occupational exposure controls

Engineering Controls

Provide local exhaust and/or general ventilation system to maintain low exposure levels. Dust collection systems must be used in transferring operations, cutting or machining or other dust generating processes. Vacuum or wet clean-up methods should be used.

Personal protective equipment

Respiratory protection

Respiratory protection: during occasional operations releasing high quantities of dust, wear minimum FP1 or preferably FP2 EEC approved dust masks. According to American National Institute For Occupational Safety And Health (NIOSH) and Mine Safety And Health Administration (MSHA) Directives, type 3M 8710 or 3M 9900 respiratory protection can for example be used.

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Eye/face Protection

Safety glasses with side-shields

Skin protection

- protective gloves
- Long sleeved shirt and long pants

General Hygiene Considerations

- Wash hands before breaks and immediately after handling the product
- Avoid contact with skin, eyes and clothing
- Avoid getting dust into boots and gloves through wrist bands and pant tucks
- Remove and wash contaminated clothing before re-use

09. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White or off-white
Physical State	Solid
Softening point	>800°C
Melting point	non applicable
Decomposition temperature	size and mat binders start to decompose at 200°C
Density (molten glass)	2.6-2.7 (water = 1)
Water solubility	insoluble

10. STABILITY AND REACTIVITY

Chemical Stability

Stable in normal use and storage conditions, and in normally foreseeable usage conditions.

Hazardous decomposition products

In continuous combustion conditions, in addition to water vapour and CO₂, small quantities of CO and NO_x may be released by the combustion of the size. See Section 5 of MSDS for hazardous decomposition products during a fire

Possibility of Hazardous Reactions

Glass roving is stable and never generates hazardous chemical reactions.

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11. TOXICOLOGICAL INFORMATION

Toxicological test

Acute toxicity:

not relevant

Local effects:

Dusts and fibers may cause mechanical irritation to eyes and skin. The irritation disappears when the exposure ceases. Mechanical irritation is not considered as a health hazard in the meaning of European directive 67/548/EC on hazardous substances. Continuous filament glass fibers do not require a classification as an irritant (Xi) under the European directive 97/69/EC.

Inhalation may cause coughing, nose and throat irritation and sneezing. High exposures may cause difficult breathing, congestion and chest tightness.

Long term health effects

Continuous filament glass fibers are not respirable according to the World Health Organization (WHO) definition. Respirable fibers have a diameter (d) smaller than 3µm, a length (l) larger than 5µm and a l/d-ratio larger than or equal to 3. Fibres with diameters greater than 3 microns, which is the case for continuous filament glass fibre, do not reach the lower respiratory tract and, therefore have no possibility of causing serious pulmonary disease.

Section 2.3 of TRGS 905, edition of June 1997 is not applicable.

The general principles of industrial hygiene for fibres with a diameter of > 3µm listed in TRGS 521 – fibre dusts – as amended in November 1997 under no. 5, which can develop or be released during processing, have to be adhered to.

Continuous filament glass fibres do not possess cleavage planes which would allow them to split length-wise into fibres with smaller diameters, rather they break across the fibre, resulting in fibres which are of the same diameter as the original fibre with a shorter length and a small amount of dust.

Microscopic examination of dust from highly chopped and pulverised glass demonstrated the presence of small amounts of respirable dust particles. Among these respirable particles, some were fibre-like in terms of l/d ratio (so-called “shards”). It can be clearly observed however that they are not regular shaped fibres but irregular shaped particles with fibre-like dimensions. To the best of our knowledge, the exposure levels of these fibre-like dust particles measured at our manufacturing plants are of the order of magnitude between 50 to 1000 below existing applicable limits.

Continuous filament glass fibers are not carcinogenic. (See section 15)

12. ECOTOXICOLOGICAL INFORMATION

No specific data are available for this product. This material is not expected to cause harm to animals, plants or fish.

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15. RECHTSVORSCHRIFTEN

This product is not hazardous according to European Directive 99/45/EC, 67/548/EEC and their latest amendment

Information on non carcinogenicity

According to E.U. Directives the continuous filament glass fibers in these products are not classified as carcinogenic.

Continuous filament glass fibers are not within the scope of Directive 67/548/EEC per amendment 97/69/EC since they are not "fibres with random orientation."

The International Agency for Research on Cancer (IARC) in June, 1987, and in October, 2001, categorized continuous filament fiber glass as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human, as well as, animal studies was evaluated by IARC as insufficient to classify continuous filament fiber glass as a confirmed, probable or even possible cancer causing material.

National chemicals inventories

Continuous filament glass fiber products are articles under the chemicals inventories listed below and consequently are exempt from listing on these inventories:

- The European Inventory of Existing Chemical Substances: EINECS/ELINCS,
- The US EPA Toxic Substance Control Act: TSCA,
- The Canadian Chemical Registration Regulations: NDSL/DSL,
- The Japanese Chemical Substances Control Law under METI: CSCL,
- The Australian Inventory of Chemical Substances: AICS,
- The Philippine Inventory of Chemicals and Chemical Substances: PICCS,
- The Korean Existing Chemicals List: (K)ECL and
- The Chinese List on New Chemical Substances

However, based on the rules enforced with regards to the marketing and use of chemicals in countries where our CFGF products are manufactured, each chemical ingredient of these finished products has to be listed on the National Chemicals Inventory of the specific country where produced.

16. OTHER INFORMATION

Preparation Date: 24.08.2008

This document has been issued to align with REACH Regulation.

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DISCLAIMER

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