SAFE USE INSTRUCTIONS SHEET

For Continuous Filament Glass Fiber Products

Preparation Date: 30-Jan-2009 **Revision Date** / **Revision Number**

0. Introduction

The European Regulation (ER) on Chemicals No. 1907/2006 (REACH) enforced on June 1st, 2007 does only require Material Safety Data Sheet (MSDS) for hazardous substances and preparations. Our continuous filament glass fibre products (CFGF) are articles under REACH and therefore, no MSDS is legally required.
OCV Reinforcement decides to provide our customers with the appropriate information for assuring the safe handling and use of Glass Fibre products through a **Safe Use Instructions Sheet.**

1. PRODUCT and COMPANY IDENTIFICATION

Generic Product Name **TWINTEX® products**

Common names TWINTEX® Roving, TWINTEX® Fabrics, TWINTEX® Consolidated plates, TWINTEX® Pellets

Producer details
European Head Quarters
European Owens Corning Fiberglass
116, Chaussée de la Hulpe
B-1170 Brussels, Belgium
Tel : +32 2 674 8320
www.ocvreinforcements.com

Production plant
OCV Chambéry France
130, Avenue des Follaz BP 928
F- 73000 Chambéry, France
Tel.: +33 4 79 96 82 00
Fax : +33 4 79 96 84 00

Emergency telephone number
Emergencies ONLY (after 5 pm AND weekends)
phone 001-419-248-5330
CHEMTREC (24h/24)
phone 001-800-424-9300

Health contacts
Health Issues Information (8am-5pm CET)
European R&D + 33 4 79 75 53 00

2. 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)
- Extremely rare possibilities of allergy

For detailed explanation see section 11.

3. COMPOSITION/INFORMATION ON INGREDIENTS

TWINTEX® is a **commingled product** based on reinforcement glass fibres and thermoplastic filaments (polypropylene (PP), copolyesters based on polyethylene terephtalate (PET) or polybutylene terephtalate (PBT)). The **thermoplastic polymers** used for commingling with the glass filaments are high molecular weight polymers present in proportions from 15 to 50 % by weight in the TWINTEX®. As for the majority of polymers, they do not feature in lists of dangerous products.

Continuous filament glass fiber (CFGF) products, as well as TWINTEX® 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 between 0.8% and 1.5%.

4. FIRST AID MEASURES

Eye contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Do not rub or scratch eyes
- If eye irritation persists, consult a specialist

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

Inhalation

In case of upper respiratory tract irritation
- Move to fresh air
- If symptoms persist, call a physician

5. FIRE-FIGHTING MEASURES

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

Only the sizing and the polymers are combustible and could release small quantities of hazardous gas in case of major and prolonged heat or fire. Combustion gases are basically carbon dioxide and water vapour. There may be small quantities of carbon monoxide, oxides of sulphur, aldehydes, reactive hydrocarbons in small quantities, which make it necessary to use protective equipment in the event of a major fire.

Suitable extinguishing media
- water
- chemical powder

Protective Equipment and Precautions for Firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Avoid contact with the skin and the eyes.

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods for Clean-up

- Pick up and transfer to properly labeled containers
- Avoid dry sweeping
- Shovel the major part of spilled material into a container
- Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and residual spilled material
- After vacuum cleaning, flush away with water

7. HANDLING AND STORAGE

Handling

- Wear appropriate personal protective equipment in case of direct contact with the product. (See section 8)
- Prevent and/or minimize dust formation

Storage Keep product in its packaging until use to minimize potential dust generation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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 mentionned 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	Total Dust	Respirable Fibre
ACGIH	**3mg/m³**	**10 mg/m³**	**1 fibre/ml**
Austria	**6 mg/m³ (fine)**		**0.5 fibre/ml**
Denmark	**5 mg/m³**	**10 mg/m³**	**1 fibre/ml**
Finland		**10 mg/m³**	**1 fibre/ml**
France		**10 mg/m³**	**1 fibre/ml**
Germany	**3 mg/m³**	**4 mg/m³**	**0.25 fibre/ml**
Ireland	**5 mg/m³**		**2 fibres/ml**
Italy	**3 mg/m³**	**10 mg/m³**	**1 fibre/ml**
Netherlands	**2 mg/m³**	**10 mg/m³**	**1 fibre/ml**
Norway	**5 mg/m³**	**10 mg/m³**	**1 fibre/ml**
Portugal		**4 mg/m³**	**1 fibre/ml**
Spain	**3 mg/m³**	**10 mg/m³**	**1 fibre/ml**
United Kingdom	**5 mg/m³**	**10 mg/m³**	**2 fibres/ml**

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	• In situation where concentrations are above exposure limits, appropriate dust masks must be worn (FFP1 or FFP2 depending on the actual airborne concentration)
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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Natural colour (colour of the pure polymer) or modified by colorants (white, black …) for standard products
Physical State	Solid
Glass Softening point	>800℃
Melting point for polymers	Polypropylene around 160℃ Copolyesters based on PBT or PET around 225℃
Decomposition temperature	The polymers begin to decompose at 280℃ for PP, 30 0℃ for polyesters based on PET and PBT
Density	Depends on the glass content by weight (specific gravity: 2.6 g/cm3) and of the polymer (specific gravity 0.9 to 1.34g/cm3 according to the product)
Solubility	Insoluble in water; sizes and polymers are partially (or even totally) soluble in most organic solvents

10. STABILITY AND REACTIVITY

Chemical Stability	The polymer components of TWINTEX® may give rise to a slight thermal degradation under normal conditions of use. The gases released may cause a certain irritation of the eyes, the nose and the throat. However, none of the polymers are classified in the list of hazardous substances, and the toxic risks are limited. To ensure comfortable working conditions and above all in the case of prolonged exposure, it is recommended to install fume extraction devices at the points of heating of TWINTEX®.
Hazardous decomposition products	See Section 5 of SUIS for hazardous decomposition products during a fire
Possibility of Hazardous Reactions	In conditions of a sustained fire, as well as water vapour and CO2, it is possible to generate small quantities of carbon monoxide, oxides of sulphur, aldehydes, reactive hydrocarbons and low concentrations of phosphorous compounds.

11. TOXICOLOGICAL INFORMATION

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.
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.

13. DISPOSAL CONSIDERATIONS

Continuous filament glass fiber waste is a non hazardous waste. European Waste Code number is 101103.
TWINTEX® waste shall be disposed according to locally applicable regulations.

14. TRANSPORT INFORMATION

IMDG/IM – **RID** – **ADR** – **ICAO** – **IATA** – **DOT** - **TDG** - **MEX** not regulated

15. REGULATORY INFORMATION

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: 30-Jan-2009

This document has been issued to align with REACH Regulation.

Disclaimer
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safe Use Instructions Sheet