

Comfil

Safety Data Sheet

Date of issue: 28.12.2006

Hybrid Yarn Comfil® - G

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1. COMPANY – PRODUCT IDENTIFICATION

MANUFACTURER: **Comfil ApS**
Korshøjvej 1
DK 8600 SILKEBORG
Tel. +45 8724 4111 Fax +45 8724 0093

PRODUCT IDENTIFICATION:

HYBRID YARN COMFIL® – G (Continuous Filament)

2. COMPOSITION – INFORMATION ON CONSTITUENT PARTS

COMFIL® – G Hybrid Yarn is a product based on a mixture of reinforcement continuous filament glass fibres (E-glass) and thermoplastic filaments

Components:	Weight %
E-glass continuous filament fibres	30-80%
Thermoplastic filaments	20-70%

E-glass is a glass with a very low alkaline content and composed of

Glass fibre (E-glass continuous filament)	> 95%
Organic surface binder/sizing	< 5%

The **Thermoplastics polymers** used for commingling with the glass filaments are high molecular weight polymers. The CAS (Chemical Abstract Service) reference numbers are respectively, for polypropylene (PP): 9003-07-0, for polyethylene terephthalate (PET): 25038-59-9 and polybutylene terephthalate (PBT): 26062-94-2.

3. HAZARD IDENTIFICATION

COMFIL® – G Hybrid Yarn products made of continuous strands of E-glass are not significantly hazardous. Hazards identified are:

- Mechanical irritation (itching)
- The formation of respirable dust and non respirable filaments
- Extremely rare possibilities of allergy.

4. FIRST AID MEASURES

General advice

Immediate medical attention is not required

Inhalation

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

Skin contact

Wash off with plenty of water. Use a mild soap if available. If skin irritation persists, consult a physician.

Eye contact

Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. If eye irritations continues, consult a physician.

Ingestion

No special measures are necessary.

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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

All usual extinguishing media as water, carbon dioxide (CO²), foam, dry chemical can be used. Do not use water, if fire is caused by an electrical short circuit. Use selfcontaining breathing apparatus for fire fighting in closed rooms.

Hazardous decomposition products

Carbon oxides, carbon monoxide and low-molecular-weight organic compounds depending on temperature and air supply.

Further information

Glass fibres are not flammable, are incombustible and don't support combustion. The packaging (plastic film, paper, cardboard, wood) and the polymers and additives are likely to burn. Combustion gases are basically carbon dioxide and water vapour. There may be small quantities of carbon monoxide, oxides of sulphur, aldehydes, reactive hydrocarbons and phosphorous compounds in small quantities, which make it necessary to use protective equipment in the event of a major fire.

6. ACCIDENTAL SPILLAGE

Personal precautions

Ensure adequate ventilation

Environmental precautions

No special environmental precautions required.

Methods for cleaning up

Pick-up and arrange for disposal in a manner that avoids creating excessive dust. After cleaning, flush away traces with water.

7. HANDLING & STORAGE

Handling (Technical measures / Precautions / Safe handling advice) :

Take measures to prevent the build up of electrostatic charge.

Avoid dust formation

Storage (Technical measures / Storage conditions):

Store away from excessive humidity to prevent damage to the product and to the packing materials which could lead to storage safety problems.

Incompatible material:

Not relevant

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure controls

Exposure Limit Values

OSHA 15mg/m³ (total dust.), 5 mg/m³ (respirable dust)

ACGIH 5mg/ m³ TWA (inhalable fraction), 1fibre/cm³ (respirable fractions)

UK, IRL OEL 5 mg/m³ TWA (inhalable dust), 2fibres/cm³ (respirable fraction)

Engineering measures to reduce exposure

Ensure adequate ventilation, especially in confined areas.

Personal protection equipment

Respiratory protection

Effective dust mask.

If use or application generates dust, use an appropriate respirator with a particulate filter.

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Hand protection

Rubber or plastic gloves.

Eye protection

Safety glasses with side-shields

Skin and body protection

Lightweight protective clothing

Hygiene measures

General industrial hygiene practice. Regular cleaning of equipment, work area and clothing.

Environmental exposure controls

No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Form:	Continuous filaments
Colour:	Natural or modified by colorants
Odour:	none

Specific temperature at which changes in physical state occur:

Glass softening point: Littleton point (defined as the temperature for which the viscosity of glass is $10^{7.65}$ Poises): approximately 850°C. Melting point: Not applicable. Glass does not melt, but the viscosity decreases by elevation of temperature and is 10^3 for E glass in a range of temperatures between 1150°C and 1250°C (fiberizing temperature). Polymers melt at the under mentioned temperatures but COMFIL® -C Hybrid Yarn does not melt but changes in physical state will occur.

Polyethylene	approx. 135°C
Polypropylene	approx. 160°C
Polyethylene terephthalate	approx. 260°C
Polybutylene terephthalate	approx. 225°C
LPET	approx. 180°C

Decomposition temperature: the polymers begin to decompose at 280°C for PP, 300°C for PET and 300°C for PBT

Flash point:	none
Explosive properties:	none
Density:	depends on the glass content by weight (specific gravity: 2.6-2.7 g/cm ³) and of the polymer (specific gravity: 0.9–1.4 g/cm ³ according to the product)
Solubility:	insoluble in water

10. STABILITY AND REACTIVITY

Stability

Stable at normal conditions. Hazardous chemical reactions do not occur.

Conditions/Materials to avoid

Strong oxidation agents as well as strong acids and caustic.

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Hazardous decomposition products

Carbon oxides, carbon monoxide and low-molecular-weight organic compounds depending on temperature and air supply.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	not relevant
Local effects:	may cause eye/skin irritation or irritation of respiratory tract.
Long term toxicity:	health injuries are not known or expected under normal use not carcinogenic (NTP, IARC, OSHA)

12. ECOLOGICAL INFORMATION

E glass is not biodegradable / soluble

The polymers, by virtue of their molecular weight and their nature, are without ecotoxicological effects.

Size and additives are organic materials slowly and only partially dissolved by natural agents like water. Their low concentration, and their very low solubility, leads to the conclusion that COMFIL® – G Hybrid Yarn is without ecotoxicological effects.

Glass strands, sizings, polymers and additives, do not contain PCB or any other polyaromatic product of the same type.

13. DISPOSAL CONSIDERATIONS

Depending on local regulations COMFIL® – G Hybrid Yarn waste can either be considered as inert waste or as common industrial waste. As such it can be landfilled, in compliance with local regulations.

Glass fibre waste cannot be destroyed by incineration and can damage incinerators by the formation of a vitrified mass.

Packaging materials can be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

COMFIL® – G Hybrid Yarn products are not considered as hazardous goods by transport regulations. They are not part of the hazardous classes listed in the international regulations.

They do not need special procedures under any regulation. For international transport in Europe by (ADR, RID, ADN), sea (OMI) or air (OAC/IATA or to the US (DOT) or Canada (TDG)), they are not shown as a risk category nor qualified by a UNO number or a packing group.

15. REGULATORY INFORMATION

COMFIL® – G Hybrid Yarn products do not require hazardous product labelling. They are articles and for this reason they have not to be listed in most of the countries, for instance in the list EINECS in Europe, ELINCS, TSCA for the US, DSL and NDSL for Canada.

General hygiene and work safety regulations apply.

16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. It is intended only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is recommended that supplementary information be requested if an unusual application of hybrid yarn is intended.

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