Safety Data Sheet

This safety Data Sheet is in accordance with the following regulations :
Regulation (EC) n° 1907/2006 and Regulation (CE) n° 1272/2008 and their amendments

Creation date: 07/04/2017 **Revision date:** 26/07/2017 **Version:** 3

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Identification of the product: **XSTRAND™ GF30-PP**

Pure substance / Mixture Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / mixture Industrial use – Composite materials, Manufacture of parts by fused filament fabrication

1.3. Details of the supplier of the safety data sheet

Supplier address
OCV Chambéry International
767, quai des Allobroges
73000 CHAMBERY FRANCE
www.owenscorning.com

E-mail address productcompliance@owenscorning.com

Phone number +39 (0)4 79 75 53 00 Monday to Friday – 8.00 am to 5.30 pm (CET)

1.4. Health contact

Emergency call European R&D: +39 (0)4 79 75 53 00 Monday to Friday – 8.00 am to 5.30 pm (CET)

Section 2 : HAZARDS IDENTIFICATION

2.1. Classification according to Regulation (EC) n° 1272/2008 (CLP)

This product is not classified hazardous according to European Regulation (EC) N° 1272/2006

Hazard symbols
Not dangerous

2.2. Label elements
Label elements according to Regulation (CE) N° 1272/2008 and its amendments
No label necessary for this product

2.3. other hazards

Potential health effects

Due to the presence of glass fibers:
May cause temporary skin and mucous membranes itching due to the mechanical abrasion effect of the fibers
Exposure to airborne dusts and fibers (inhalation)

Due to the presence of polymer powder (generated by abrasion process):
Potential health effects:
irritation: Possible irritation of respiratory system (by dust inhalation)
inhalation: At high temperature, thermal decomposition products can be irritating to respiratory tract.
Ingestion: may be harmful if swallowed

For detailed explanation see section 11

Environmental effect:
Not biogegradable

Physical and chemical hazards

In the presence of an ignition source: dust may form explosive mixture in air. Thermal decomposition giving toxic and corrosive products/ decomposition product see chapter 10.

Other:
Results of PBT and vPvB assessment: Based on the available information, it is not possible to conclude on PBT and vPvB criteria according to REACH Regulation, annex VII**.**

Section 3 : COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature of the mixture:
Glass fibers: 30%
Polypropylene : 68%
Presence of additives in quantities lower than 2%.

Section 4 : FIRST AID MEASURES

4.1. Description of necessary first aid measures

General Advice	No hazard which requires special first aid measures
Inhalation	Inhalation of vapours due to thermal decomposition: Move to fresh air. Oxygen or artificial respiration if needed. If symptoms persist or in case of problem, call a physician
Skin contact	Cool the molten product on the skin with plenty of cold water. Do not remove the solidified product. Call for medical assistance. Do not rub or scratch affected areas Remove contaminated clothing
Eye contact	Cool and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub or scratch eyes, consult an ophthalmologist.
Ingestion	In case of problems, consult a physician
Protection of first-aiders	In case of insufficient ventilation, wear suitable respiratory equipment.

4.2. Most important symptoms/effect, acute and delayed

Symptoms No data available.

4.3. Indication of immediate medical attention and special treatment, if necessary

Note to the physician No data available

Section 5 : FIRE FIGHTING MEASURES

.1. Extinguishing media

Suitable extinguishing media Water spray, dry chemical, foam, carbon dioxide

Unsuitable extinguishing media No known

5.2. Special hazards arising from the substance or mixture

Thermal decomposition giving toxic and corrosive products: Carbon monoxide, Ammonia, Amino derivatives
Formation of toxic products through combustion: Carbon oxides, Hydrocarbons, Hydrogen cyanide (hydrocyanic acid) (traces), nitrogen oxides.

5.3. Advice to firefighters

Specific methods:
Ensure a system for the rapid empting of containers. In case of fire nearby, remove the bags.

Special protective actions for firefighters:
Wear self-contained breathing apparatus and full fire fighting protective gear.

Section 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Wear safety gloves, glasses/goggles.
Do not smoke.

6.2. Environmental precautions

Do not release in the environment.

6.3. Méthodes et matériel de confinement et de nettoyage

Methods for clean-up Pick up and transfer to properly labeled containers
Sweep up to prevent slipping hazard; Avoid dry sweeping

Elimination Destroy the product by incineration (in accordance with local and national regulations)

6.4. Référence à d'autres sections

None.

Section 7 : HANDLING AND STORAGE

7.1. Precautions for safe handling

Technical measures/ precautions: Storage and handling precautions applicable to products: solid. Provide appropriate exhaust ventilation at machinery and at places. Provide electrical earthing of equipment.

Safe handling advice During use and thermal treatment of the product, low amounts of volatile hydrocarbons may be

released. Ensure sufficient ventilation. A local extraction at emission point may be necessary. Avoid inhalation of extrusion fumes. In case of insufficient ventilation, wear suitable respiratory equipment. Take precautionary measures against stactic discharges.

Hygiene Measures Do not breathe vapours/dust. When using do not eat, drink or smoke. Wash hands after handling.

7.2. Conditions for safe storage, including any incompatibilities:

Storage conditions No specific storage conditions are required. Avoid ingnition sources

Incompatible products None known

Packaging material No specific recommendation

7.3. Specific end use(s) No specific end use has been currently identified

Section 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Continuous filament glass fibers contained in the mixture are not respirable however certain mechanical processes might generate airborne dust or fiber (See section 11). The occupational exposure limits below mentioned are applicable to airborne fiber 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 United States and some of European countries.

	Respirable Dust	Total Inhalable Dust	Respirable Fibre
ACGIH (US)	3 mg/m³	10 mg/m³	1 fibre/ml
EH40 WEL	4 mg/m³	10 mg/m³	1 fibre/ml
Austria	5 mg/m³	5 mg/m³	0,5 fibre/ml
Belgium	3 mg/m³	10 mg/m³	1 fibre/ml
Denmark	5 mg/m³	10 mg/m³	0,1 fibre/ml
Finland	-	10 mg/m³	1 fibre/ml
France	5 mg/m³	10 mg/m³	1 fibre/ml
Germany	1,25 mg/m³	10 mg/m³	-
Ireland	4 mg/m³	10 mg/m³	1 fibre/ml
Italy	3 mg/m³	10 mg/m³	1 fibre/ml
Netherlands	3 mg/m³	10 mg/m³	0,5 fibre/ml
Norway	5 mg/m³	10 mg/m³	1 fibre/ml
Portugal	3 mg/m³	10 mg/m³	1 fibre/ml
Spain	3 mg/m³	10 mg/m³	1 fibre/ml
Sweden	5 mg/m³	10 mg/m³	1 fibre/ml
Switzerland	3 mg/m³	10 mg/m³	0,5 fibre/ml
United Kingdom	4 mg/m³	10 mg/m³	2 fibres/ml

Exposure limit values Not relevant.

Derived No Effect Level (DNEL) No data available.

Predicted No Effect Concentration No data available.

8.2. Occupational exposure controls

General protective measures Provide local appropriate exhaust and/or general ventilation system at machinery and at place where fumes can be generated to maintain low exposure level. Efficient fumes/dust collection system must be used in transferring operations, cutting or machining or other fumes/dust generating processes.
Vaccum or wet cleaning methods should be used

Personal protective equipment Wear appropriate clothing

Respiratory protection In situation where concentrations may be above exposure limits, appropriate fumes/dust mask must be worn; filter type FFP2 recommended depending on the actual airborne concentration.
In case of hazardous fumes, wear self contained breathing apparatus.

Eyes/face protection Safety glasses with side-shields

Skin/hands protection Protective Gloves (PolyVinyl Chloride, Neoprene, synthetic rubber)

Body protection

General Hygiene Considerations Wash hands before breaks
Remove and wash contaminated clothing before re-use

Environmental exposure controls See Chapter 6.

Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	
Physical state (20°C)	Solid
Form:	wire
Colour:	black
Granulometry	not applicable
Odour	None
Olfactory threshold	Not relevant
pH	not applicable
Melting point/range	130-170°C (Polymer)
Softening point	>800°C (glass)
Boiling point/boiling range	Not applicable (decompose on heating – polymer)
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	not flammable
Vapour pressure	No data available
Vapour density	No data available
Density	1.40 – 1.50 kg/ m^3, at 20°C (polymer)
Water solubility	insoluble

Partition coefficient: n-Octanol/water	not applicable
Auto-ignition temperature	>320°C
Decomposition temperature	not available
Viscosity, kinematic	Not applicable
Explosive properties	
Dust explosion class	Not applicable
Minimum ignitionn energy	Not applicable
Oxidizing properties	Not relevant (due to the chemical structure)

9.2 Other data

Solubility in other solvents (polymer) not available

Section 10 : STABILITY AND REACTIVITY

10.1 Reactivity The product is a stable mixture thermoplastic polymer / glass fiber, without chemical reactivity

10.2 Chemical stability The product is stable under normal handling and storage conditions

10.3 Possibility of hazardous reactions No known

10.4 Conditions to avoid Temperature above 90°C (storage)

10.5 Incompatible material to avoid None under normal conditions of use

10.6 Hazardous decomposition products

Thermal decomposition (Polymer) Thermal decomposition giving toxic and corrosive products: Carbon monoxide, Ammonia, amino-derivatives

Formation of toxic products through combustion: Carbon oxides, Hydrogen cyanide (hydrocyanic acid), Nox, traces of toxic products

Section 11 : TOXICOLOGICAL INFORMATION

According to its composition, this product should not be harmful in normal conditions of use.

11.1 Information on toxicological effects No data available on the mixture

For the polymer contained in the mixture The polymer is not considered as an harmful preparation according to directive 1999/45/CE

Acute toxicity

Inhalation	Dust inhalation may generate irritation of the respiratory tract. Prolonged inhalation at high doses of decomposition products may indice headache and irritation of the respiratory tract.
Ingestion	not probable
Dermal	According to its composition, this product should not be harmful in normal conditions of use.

Local effects (Corrosion / Irritation / Serious eye damage):

Skin contact: Dust and fibers that may be generated by mechanical treatment may cause temporary skin and mucous membranes itching due to the abrasion effect of the fibers. The symptoms disappear when the exposure ceases. Mechanical abrasion is not considered as a health hazard in the meaning of Regulation EC 1272/2008. Continuous filament glass fibers are not classified as irritants under the regulation EC 1272/2008.

Eye contact May be considered as comparable to a similar product for which experimental data are: Slightly or not irritating to eyes

Respiratory or skin sensitization

Inhalation 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. Fibers with diameters greater than 3 microns, which is the case for continuous filament glass fibers, do not reach the lower respiratory tract and, therefore have no possibility of causing serious pulmonary disease.

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

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

Continuous filament glass fibers are not carcinogenic (see section 15)

Skin contact May be considered as comparable to a similar product for which experimental data are: not a skin sensitizer

CMR effects:

Mutagenicity Contains no ingredient considered as genotoxic

Carcinogenicity According to its composition, this product should not be harmful in normal conditions of use

Reproductive toxicity According to its composition, this product should not be harmful in normal conditions of use

Specific target organ toxicity

Single exposure – inhalation According to its composition, this product should not be harmful in normal conditions of use

Repeated exposure According to its composition, this product should not be harmful in normal conditions of use

Aspiration hazard Not relevant due to composition

Section 12 : ECOTOXICOLOGICAL INFORMATION

Information on the product No data available on the product

Information on components The Polymer and the glass fibers are not considered as hazardous for the environment

12.1 Acute toxicity: No data available

12.2 Persistence and degradability:

Biodegradation (in water) Inert polymer , not biodegradable on the basis of its structure

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil – Distribution among environmental compartments : no data available

12.5 Results of PBT and vPvB assessment Based on the available information, it is not possible to conclude on PBT and vPvB criteria according to REACH regulation , annex XIII

12.6 Other adverse effects None known

Section 13 : DISPOSAL CONSIDERATIONS

13.1 Waste treatment

Disposal of product Do not dispose of waste into sewer. Destroy the product by incineration (in accordance with local and national regulations)

Disposal of packaging Do not release into the environment. Destroy packaging by incineration at an approved waste disposal site (in accordance with the local and national regulations)

Section 14 : TRANSPORT INFORMATION

IMDG/IM , RID, ADR, ICAO, IATA, DOT, TDG, MEX **:** Not regulated, not classified as dangerous in the meaning of transport regulations

Section 15 : REGULATORY INFORMATION

Safety data sheet: in accordance with annex II of Regulation (EC) N° 1907/2006 and its amendments

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on non carcinogenicity (glass fibers)

Continuous Filaments glass fibers are not classified as carcinogenic by regulation (EC) 1272/2008 since they are not “fibers with random orientation”.

The International Agency for Research on Cancer (IARC) in June 1987 and in October 2001, categorized contunouous filament glass fibers 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 glass fibersas a confirmed, probable or even possible cancer causing material.

UK regulation: Chip3,: Chemical (Hazard Information and Packaging for Supply) Regulation 2002
Major Accident Hazard Legislation Not applicable

15.2 Chemical safety assessment This information is not required

INVENTORIES

Continuous Filament Glass fibers Continuous filament glass fiber products are ***articles*** under the following chemical inventories listed hereafetr and consequently are exempt from listing under these inventories: EINECS / EILINCS, TSCA, NDSL / DSL, CSCL, AICS, PICCS, (K)ECL, IESCSC.

However, based on the rules enforced with regards to the marketing and use oof 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.

Section 16 : OTHER INFORMATION

This document has been issued to align with REACH Regulation

Miscellaneous / Other information:

Disclaimer

Reasonable care has been taken in the presentation 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