



SAFETY DATA SHEET

Creation Date 17-Jan-2019

Revision Date 17-Jan-2019

Version 1

1. IDENTIFICATION

Product Name XSTRAND™ GF30-PC

Product Code OCCM20003

Recommended Use Industrial use – Composite materials, manufacture of parts by fused filament fabrication

Manufacturer Address Owens Corning Composite Materials, LLC
One Owens Corning Parkway
Toledo, Ohio 43659

Company Phone Number 1-800-GET-PINK or 1-800-438-7465
24 Hour Emergency Phone Number Chemtec 1-800-424-9300 or 1-703-741-5970 CCN17393
Emergency Telephone 1-419-248-5330 (after 5 pm ET and weekends)

E-mail address productcompliance@owenscorning.com
Company Website <http://www.owenscorning.com/>

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This product is not classified as hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

WHMIS Regulatory Status This product is not classified as hazardous according to the Canadian Hazardous Products Regulation SOR/2015-17

Label elements

This product is not classified according to Globally Harmonized System (GHS)

Hazards not otherwise classified (HNOC) Not applicable

Other Information Due to the presence of glass fibers, may cause temporary skin and mucous membranes itching due to mechanical abrasion effect of fibers.
Due to the presence of polymer powder generated by product abrasion, dust inhalation may cause temporary irritation of respiratory system.
In presence of an ignition source, dust may form explosive mixture in air
At high temperature, thermal decomposition products can be irritating to respiratory tract.
Also harmful if swallowed

Unknown acute toxicity Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Components

Polycarbonate 65 - 75 %
 Continuous filament glass fiber 25 - 35 %
 Additives 0 - 2%

Chemical name	CAS No.	Weight-%	Trade Secret
Continuous filament glass fiber, non-respirable	65997-17-3	25 - 35	*

*The exact percentage (concentration) of composition has been withheld as a trade secret or for covering a group of substantially similar products

Comments The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product

4. FIRST AID MEASURES

Description of First Aid Measures

- Eye contact**
 - Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
 - DO NOT rub or scratch eyes
- Skin contact**
 - Wash skin with soap and water
 - In case of contact with molten product:
 - Immediately drench or immerse area in water to assist in cooling
 - In case of burns, immediately cool affected skin for as long as possible with cold water
 - Removal of solidified molten material from skin requires medical assistance
- Inhalation**
 - Move to fresh air in case of accidental inhalation of vapors or decomposition products
 - If symptoms persist, call a physician
- Ingestion**
 - Clean mouth with water
 - Do not induce vomiting without medical advice
 - Call a physician
- Most important symptoms and effects, both acute and delayed**
 - No data available
- Note to physicians**
 - No data available

5. FIRE-FIGHTING MEASURES

- Flammable properties**
 - Combustible material
 - Powdered material may form explosive dust-air mixtures
- Suitable extinguishing media**
 - Use CO2, dry chemical, or foam
 - Water spray or fog
- Unsuitable extinguishing media**
 - None known
- Specific hazards arising from the chemical**
 - Thermal decomposition can lead to release of toxic/corrosive products: Carbon monoxide, Phenol, Chlorobenzene, Bisphenol A.
 - Release of toxic products through combustion: Carbon oxides, Hydrocarbons, Hydrogen cyanide (hydrocyanic acid) (traces), nitrogen oxides.
 - In the event of fire and/or explosion do not breathe fumes

Explosion data

- Sensitivity to Mechanical Impact** • Not impact sensitive
- Sensitivity to Static Discharge** • Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

- Protective equipment and precautions for firefighters** • As in any fire, wear self-contained breathing apparatus (positive-pressure), MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions**
 - Avoid contact with eyes and skin
 - Remove all sources of ignition
 - Avoid creating dust
- Environmental precautions**
 - Avoid release to the environment
 - See Section 12 for ecotoxicology additional information

Methods and material for containment and cleaning up

- Methods for containment**
 - Stop leak if you can do it without risk
- Methods for cleaning up**
 - Use personal protective equipment as required
 - Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry
 - Take up mechanically, placing in appropriate containers for disposal
 - Avoid creating dust
 - Clean contaminated surface thoroughly

7. HANDLING AND STORAGE

Precautions for safe handling

- Technical measures**
 - Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity)
 - Provide electrical earthing of equipments
- Advice on safe handling**
 - Handle in accordance with good industrial hygiene and safety practice
 - Avoid creating dust
 - Ensure adequate ventilation, especially in confined areas
 - During use and thermal treatment of the product, avoid inhalation of extrusion fumes
 - Take precautionary measures against static discharges
 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Conditions for safe storage, including any incompatibilities

- Storage Conditions**
 - Store in a well-ventilated place. Keep cool
 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Incompatible materials**
 - Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

- Exposure Guidelines** As manufactured, continuous filament glass fibers are not respirable. Under normal conditions of use, these products may release dust and non-respirable fibers (Particles Not Otherwise Regulated). Under severe process conditions (e.g. shredding, crushing), they may release very small amount of respirable particulate, some of which may be glass

shards (see section 11)
 During the use of the product, especially during its thermal treatment, the occupational exposure limits mentioned below must be respected

Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
Continuous filament glass fiber, non-respirable 65997-17-3	TWA: 1 fiber/cm ³ respirable fibers: length >5 µm, diameter less than 3 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m ³ inhalable particulate matter	-	-
Chlorobenzene 108-90-7	TWA: 10 ppm	TWA: 75 ppm TWA: 350 mg/m ³ TWA: 75 ppm TWA: 350 mg/m ³	IDLH: 1000 ppm
Phenol, pure 108-95-2	TWA: 5 ppm S*	TWA: 5 ppm TWA: 19 mg/m ³ TWA: 5 ppm TWA: 19 mg/m ³ S* S*	IDLH: 250 ppm Ceiling: 15.6 ppm 15 min Ceiling: 60 mg/m ³ 15 min TWA: 5 ppm TWA: 19 mg/m ³

NIOSH REL Immediately Dangerous to Life or Health

Engineering Controls

Ensure adequate ventilation, especially in confined areas
 Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits
 especially in transferring, cutting or machining operations or other fumes/dust generating processes

Individual protection measures, such as personal protective equipment

Eye/face protection

- Wear safety glasses with side shields (or goggles)

Skin and body protection

- Wear long-sleeved shirt and long pants
- Wear protective gloves (heat insulated, leather, lined neoprene coated gloves are recommended when working with hot product)

Respiratory protection

- Provide adequate ventilation
- In case of insufficient ventilation, wear suitable respiratory equipment
- Do not breathe gas/fumes/vapor/spray

General Hygiene Considerations

- Wash hands before breaks and immediately after handling products
- Remove and wash contaminated clothing before re-use

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Appearance	wire
Odor	Odorless
Color	Black
pH value	Not applicable
Melting point / freezing point	130 - 160°C (Polymer)
Boiling point / boiling range	Not applicable (decompose on heating – polymer)
Flash point	Not applicable
Evaporation rate	Not applicable
Vapor pressure @20 °C (kPa)	No information available
Density VALUE	1.20 – 1.40 kg/ m ³ , at 20°C (polymer)
Water solubility	Insoluble in water
Autoignition temperature	No information available
Explosive properties	Not an explosive

Oxidizing properties Not an oxidizer
Softening point Not applicable

10. STABILITY AND REACTIVITY

Reactivity • No known reactivity

Chemical stability • Stable under recommended storage conditions
 • Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Possibility of Hazardous Reactions • Powdered material may form explosive dust-air mixtures

Conditions to avoid • Heat, flames and sparks

Incompatible materials • Strong oxidizing agents

Hazardous Decomposition Products • Thermal decomposition can lead to release of toxic/corrosive products: Carbon monoxide, Phenol, Chlorobenzene, Bisphenol A.
 • Release of toxic products through combustion: Carbon oxides, Hydrocarbons, Hydrogen cyanide (hydrocyanic acid) (traces), nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available on the mixture

Components Information

Dust inhalation may generate irritation of the respiratory tract. Prolonged inhalation at high doses of decomposition products may lead to headache and irritation of the respiratory tract.

Due to the presence of glass fibers, may cause temporary skin and mucous membranes itching due to mechanical abrasion effect of fibers.

Due to the presence of polymer powder generated by product abrasion, dust inhalation may cause temporary irritation of respiratory system.

At high temperature, thermal decomposition products can be irritating to respiratory tract. 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 fiber, 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 planes 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. 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 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 particles 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 of the order of magnitude between 50 to 1000 below existing applicable limits

The International Agency for Research on Cancer (IARC) in June, 1987, and in October, 2001 (see IARC Monographs on the Evaluation of Carcinogenic risks to humans –

Man-made Vitreous Fibers – Volume 81), 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
 Continuous filament glass fibers are classified as A4 - Not Classifiable as a Human Carcinogen

Chemical name	Oral LD50	LD50/dermal/rat - NO UNITS (Wizards mg/kg)	Inhalation LC50
Chlorobenzene 108-90-7	= 2914 mg/kg (Rat)	-	= 13.5 mg/L (Rat) 7 h
Phenol, pure 108-95-2	= 340 mg/kg (Rat)	= 630 mg/kg (Rabbit)	-
Bisphenol A 80-05-7	= 3300 mg/kg (Rat)	= 3 mL/kg (Rabbit)	> 0.17 mg/L (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization None known.
Germ cell mutagenicity None known.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Chlorobenzene 108-90-7	A3	-	-	-
Phenol, pure 108-95-2	-	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
 A2 - Suspected Human Carcinogen
 IARC (International Agency for Research on Cancer)
 Group 1 - Carcinogenic to Humans
 Group 3 - Not classifiable as a human carcinogen
 NTP (National Toxicology Program)
 Known - Known Carcinogen
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Reproductive toxicity According to its composition, this product should not be harmful in normal conditions of use.
STOT - single exposure According to its composition, this product should not be harmful in normal conditions of use.
STOT - repeated exposure According to its composition, this product should not be harmful in normal conditions of use.
Target Organ Effects According to its composition, this product should not be harmful in normal conditions of use.
Aspiration hazard Not relevant.

12. ECOLOGICAL INFORMATION

- Persistence and degradability** • Not biodegradable
- Bioaccumulation** • No information available
- Mobility** • No information available
- Other adverse effects** • No information available

13. DISPOSAL CONSIDERATIONS

- Disposal of wastes**
 - Should not be released into the environment
 - Incineration, disposal or recycling at specific offsite provider
 - Disposal should be in accordance with applicable regional, national and local laws and regulations

- Contaminated packaging** • Dispose of in accordance with federal, state and local regulations
- US EPA Waste Number** • No EPA Waste Number applies to the product

14. TRANSPORT INFORMATION

- DOT** Not regulated
- TDG** Not regulated
- MEX** Not regulated
- ICAO (air)** Not regulated
- IATA** Not regulated
- IMDG** Not regulated
- RID** Not regulated
- ADR** Not regulated
- ADN** Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Continuous filament glass fiber, non-respirable 65997-17-3	X	X		X		X	X	X	X	X

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and

Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical name	California Proposition 65
Bisphenol A 80-05-7	Female Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Chlorobenzene 108-90-7	X	X	X
Phenol, pure 108-95-2	X	X	X
Bisphenol A 80-05-7	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By	FCs
Creation Date	17-Jan-2019
Revision Date	17-Jan-2019
Revision Note	New Product

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 Safety Data Sheet