



SAFETY DATA SHEET

Creation Date 10-Apr-2018

Revision Date 10-Apr-2018

Version 1

1. IDENTIFICATION

Product Name XSTRAND™ GF30-PA6 3D filament

Product Code OCCM20002

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.
At high temperature, thermal decomposition products can be irritating to respiratory tract.

Unknown acute toxicity Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Components

Polyamide 6 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

- 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, Ammonia, Amino derivatives
- Release of toxic products through combustion: Carbon oxides, Hydrocarbons, Hydrogen cyanide (hydrocyanic acid) (traces), nitrogen oxides.

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 • Break up and remove solidified material. Material may be remelted and reclaimed. Recycling recoverable material is recommended

Methods for cleaning up • Pick up and transfer to properly labeled containers
• Minimize dust generation and accumulation

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
• Do not breathe dust/fume/gas/mist/vapors/spray
• During use and thermal treatment of the product, avoid inhalation of extrusion fumes
• Take precautionary measures against static discharges

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 • None known

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)

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		
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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** • No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required
 • In case of insufficient ventilation, wear suitable respiratory equipment
- 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	200 - 220°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	1.10 – 1.20 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 normal conditions
 • Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Possibility of Hazardous Reactions** • None under normal processing
- Conditions to avoid** • Avoid temperatures above 90°C (184°F)

Incompatible materials • None known

Hazardous Decomposition Products • Thermal decomposition can lead to release of toxic/corrosive products: Carbon monoxide, Ammonia, Amino derivatives
 • 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

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
Continuous filament glass fiber, non-respirable	-	Group 3	-	-

65997-17-3			
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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

Ecotoxicity	• No data available
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	<ul style="list-style-type: none"> • 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 are applicable

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

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 does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

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

Prepared By FCs
 Creation Date 10-Apr-2018
 Revision Date 10-Apr-2018
 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