SAFE USE INSTRUCTION SHEET

Creation Date 29-May-2015 **Revision Date** 25-May-2017 **Version** 2

0. GENERAL INFORMATION

This Safe Use Instruction Sheet is the document provided by Owens Corning to communicate recommended safe handling and use instructions for manufactured articles neither regulated by OSHA Hazard Communication Standard, 29 CFR 1910.1200 nor by the Canada Hazardous Products Regulation SOR/2015-17 (WHMIS 2015)

1. IDENTIFICATION

Product Name Continuous Filament Glass Fiber Products: Chopped Strands Mat, Continuous Filament Mat

Synonyms Unifilo® , Uniconform® , Multiconform® , M8643, M8643X7, U101, U527, U528, U529, U720, U754, T754, U746, U756, U750, U740, T750, U801, U809, U812, U813, U814, U816, U817, U822, U850, U852, U854, UM2A, UM2B, UM5B, U614, M5, M113, M123, M125, M143, M413, M711, M715, M715X1, M720, M723A, M723A X4, M723A X6, CM1091, CM1099, CM1100, CM1141, CM-200, CM-220, UM1A, U862

Product Code OCCM10002

Recommended Use Industrial use, reinforcement of composite material

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 Chemtrec 1-800-424-9300
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 Continuous Filament Glass Fiber (CFGF) Products are articles
Articles which meet the definition of 29 CFR 1910.1200 (b)(6)(v) (a manufactured item other than a fluid or a particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has an end use function(s) dependant in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical (as determined in paragraph (d) of this section), and does not pose a physical hazard or health risk to employees) are not regulated by OSHA HazCom Standard

WHMIS Regulatory Status Continuous Filament Glass Fiber (CFGF) Products are manufactured articles
Manufactured articles which meet the definition of the Canadian Hazardous Products Act (any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product) are not regulated by the Canadian Hazardous Products

Regulation SOR/2015-17

Other Information

As manufactured continuous filament glass fibers are non-respirable. May cause temporary skin and mucous membranes itching due to mechanical abrasion effect of fibers. 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), these products may release very small amount of respirable particulate, some of which may be fiber-like in terms of l/d ratio (so-called "shards"). See Section 8 for Exposure Limit Data.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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 below 3% For Chopped Strand Mat (CSM) and Continuous Filament Mat (CFM) products, a binder is applied in a secondary step to form the mat. The binder is a mixture of polymeric resin and surfactant. The content of sizing and binder is usually below 15% of the product weight

4. FIRST AID MEASURES

Description of First Aid Measures

Eye contact

• DO NOT rub or scratch eyes
• Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
• If eye irritation persists: Get medical advice/attention

Skin contact

• Wash off immediately with soap and plenty of 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 area
• If skin irritation persists, call a physician

Inhalation

• Move victim to fresh air
• If symptoms persist, call a physician

Ingestion

• Accidental ingestion of this material is unlikely
• Rinse mouth with water and drink water to remove fibers from the throat
• If symptoms persist, call a physician

5. FIRE-FIGHTING MEASURES

Flammable properties

• Continuous Filament Glass Fiber products are not flammable, are incombustible and do not support combustion. Only the Sizing is combustible and could release small quantities of undetermined hazardous substances in case of major and prolonged heat or fire

Suitable extinguishing media

• Use CO2, dry chemical, or foam
• Water spray or fog

Protective equipment and precautions for firefighters

• As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
- Avoid contact with eyes and skin
- Avoid creating dust
- Use personal protection recommended in Section 8

Methods for cleaning up
- Avoid dry sweeping
- Avoid creating dust
- Take up mechanically, placing in appropriate containers for disposal
- Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination
- After cleaning, flush away traces with water

7. HANDLING AND STORAGE

Precautions for safe handling
- Avoid contact with skin, eyes or clothing
- Prevent and/or minimize dust formation

Storage Conditions
- Keep product in packaging until use to minimize potential dust generation

Incompatible materials
- None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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	Ontario TWA
Continuous filament glass fiber, non-respirable 65997-17-3	TWA: 1 fiber/cm3 respirable fibers: length >5 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/m³ inhalable particulate matter	-	-	TWA: 1 fibre/cm3 TWA: 5 mg/m³

OSHA PEL: TWA for Inert or Nuisance Dust are 5 mg/m³ (Respirable fraction) and 15 mg/m³ (Total dust)
Ontario: TWA for Particles (Insoluble or Poorly soluble) Not Otherwise Specified (PNOS) are 3 mg/m³ (Respirable fraction) and 10 mg/m³ (Inhalable fraction)

Engineering Controls

Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits
Local exhaust ventilation should be provided at areas of cutting, milling or other similar processing to remove airborne dust and fibers

Individual protection measures, such as personal protective equipment

Eye/face protection
- Wear safety glasses with side shields (or goggles)

Skin and body protection
- Wear protective gloves
- Wear long-sleeved shirt and long pants

Respiratory protection
- If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

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 @20°C	Solid - fiber with diameter larger than 6 micron
Appearance	Glass fiber yarns
Odor	Odorless
Color	White
Water solubility	Insoluble in water
Softening point	> 800°C ; > 1500°F
Density	2.6 (glass)

10. STABILITY AND REACTIVITY

Stability
- Stable under normal conditions

Possibility of Hazardous Reactions
- None under normal processing

Hazardous Decomposition Products
- None under normal use conditions
- Small quantities of undermined hazardous decomposition products may be released in case of heat exposure or during a fire

11. TOXICOLOGICAL INFORMATION

Product Information

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

ACGIH (American Conference of Governmental Industrial Hygienists)

Continuous filament glass fibers are classified as A4 - Not Classifiable as a Human Carcinogen

IARC (International Agency for Research on Cancer)

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

NTP (National Toxicology Program)

Continuous filament glass fibers are not listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

12. ECOLOGICAL INFORMATION

This product is not expected to be hazardous for the environment

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable regional, national and local laws and regulations

14. TRANSPORT INFORMATION

These products are not classified as dangerous goods according to international transport regulations

15. REGULATORY INFORMATION

International Inventories	Continuous filament glass fiber products are articles. Articles are exempted from registration or listing under chemicals inventories like TSCA (USA), DSL/NDSL (CAN), REACH (EU), ENCS (JP), IECSC (CN), KECL (KR), PICCS (PH), AICS (AUS)
California Proposition 65	This product is not regulated under California Proposition 65

16. OTHER INFORMATION

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Revision Note	Review of Section 2

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 Instruction Sheet