



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01-A

*** Section 1 - Chemical Product and Company Identification ***

Product Name(s): Woven Unidirectional Fiberglass Fabric (A-Style Warp Unidirectional), Stitchbonded Fiberglass Fabric, Woven Fiberglass Fabric, Woven Roving

Owens Corning
One Owens Corning Parkway, World Headquarters
Attn. Product Stewardship
Toledo, OH 43659, USA

Emergency Contacts:

Emergencies ONLY (after 5pm ET and weekends): 1-419-248-5330,
CHEMTREC (24 hours everyday): 1-800-424-9300,
CANUTEC (Canada-24 hours everyday): 1-613-996-6666

Health and Technical Contacts:

Health Issues Information (8am-5pm ET): 1-800-GET-PINK,
Technical Product Information (8am-5pm ET): 1-800-GET-PINK

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent by Wt.
65997-17-3	Fiber Glass (continuous filament, non-respirable)*	94-100
N/A	Size	0-2
N/A	Polyester Yarn	0-4

*As manufactured continuous filament glass fibers are not respirable. Continuous filament glass products that are chopped, crushed or severely mechanically processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards. See section 8 of Material Safety Data Sheet for exposure limit data.

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: glass wool fiber, fibrous glass and nuisance particulates.

Component Information/Information on Non-Hazardous Components

No additional information available.

*** Section 3 - Hazards Identification ***

Emergency Overview

No unusual conditions are expected from this product.

Appearance and Odor:

White/off-white colored solid with no odor.

Primary Route(s) of Exposure:

Inhalation, lungs, skin and eye



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

Potential Acute Health Effects

Inhalation:

Dusts and fibers from this product may cause mechanical irritation of the nose, throat and respiratory tract.

Skin Contact:

Dusts and fibers from this product may cause temporary mechanical irritation to the skin.

Eye Contact:

Dusts and fibers from this product may cause temporary mechanical irritation to the eyes.

Ingestion:

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Medical Conditions Aggravated by Exposure:

Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.

Chronic Conditions:

See Section 11 for additional information.

* * * Section 4 - First Aid Measures * * *

Inhalation:

If inhaled, move the affected person to fresh air. If irritation persists get medical attention.

Skin Contact:

For skin contact, wash with mild soap and cold water. Do not wash with warm water because this will open up the pores of the skin, which will cause further penetration of the fibers. Use a washcloth to help remove fibers. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibers into the skin. If irritation persists get medical attention.

Never use compressed air to remove fibers from the skin. If fibers are seen penetrating from the skin, the fibers can be removed by applying and removing adhesive tape so that the fibers adhere to the tape and are pulled out of the skin.

Eye Contact:

Immediately flush eyes with plenty of running water for at least 15 minutes. If irritation persists get medical attention.

Ingestion:

Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur. Do not induce vomiting unless directed to do so by medical personnel. Seek medical attention if irritation persists.



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

*** Section 5 - Fire Fighting Measures ***

Flash Point: None	Flash Point Method: Not determined
Upper Flammability Limit: None	Lower Flammability Limit: None
Flammability Classification: Non-flammable	

Extinguishing Media:

Dry chemical, foam, carbon dioxide, and water fog.

Unusual Fire & Explosion Hazards:

None known.

Fire-Fighting Instructions:

Use self-contained breathing apparatus (SCBA) and full bunker turnout gear in a sustained fire.

Hazardous Combustion Products:

Primary combustion products are carbon monoxide, hydrogen, carbon dioxide and water. Other undetermined compounds could be released in small quantities.

*** Section 6 - Accidental Release Measures ***

Containment Procedures:

This material will settle out of air. If concentrated on land, it can then be scooped up for disposal as non-hazardous waste. This material will sink and disperse along the bottom of waterways and ponds. It cannot easily be removed after it is waterborne; however, the material is non-hazardous in water.

Clean-Up Procedures:

Scoop up material and put into a suitable container for disposal as a non-hazardous waste.

*** Section 7 - Handling and Storage ***

Handling Procedures:

Keep product in its packaging, as long as practicable to minimize potential dust generation. Keep work areas clean. Avoid unnecessary handling of scrap materials. Wear PPE as described in Section 8.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

B: Exposure Limits

Fiber Glass Continuous Filament (65997-17-3)

Ingredient	OSHA PEL (8-hr TWA)	ACGIH TLV (8-hr TWA)
Non-respirable fibers and particulate	15 mg/m ³ (total dust) (a)	5 mg/m ³ (inhalable fraction)
Respirable particulate	5 mg/m ³ (respirable dust) (b)	None
Respirable particulate with fiber like dimensions (glass shards)	None Established	None Established

Polyester Yarn

OSHA PEL (8-hr TWA)	ACGIH TLV (8-hr TWA)
15 mg/m ³ (total dust)	10 mg/m ³ (inhalable fraction)
5 mg/m ³ (respirable dust)	3 mg/m ³ (respirable)

Ventilation:

General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below regulatory limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection:

A properly fitted NIOSH approved N 95 series disposable dust respirator such as the 3M model 8210 (model 8271 in high humidity environments) or equivalent should be used when high dust levels are encountered, the level of glass fibers in the air exceeds the occupational exposure limits, or if irritation occurs.

Skin Protection:

Normal work clothing (long sleeved shirts and long pants) is recommended. Use gloves. Skin irritation is known to occur chiefly at the pressure points such as around the neck, wrists, waist and between the fingers.

Eyes/Face Protective Equipment:

Wear safety glasses, goggles or face shield.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	White/off-white Solid	Odor:	None
Physical State:	Solid	pH:	Not applicable
Vapor Pressure (mm Hg @ 20 C):	Not applicable	Vapor Density (Air=1):	Not applicable
Boiling Point:	Not applicable	Solubility (H2O):	Insoluble
Specific Gravity (Water=1):	2.60	Freezing Point:	Not applicable
Evaporation Rate (n-Butyl Acetate=1):	Not applicable	Viscosity:	Not applicable
VOC:	<0.4%	Melting Point:	>800°C

Physical Properties: Additional Information

No additional information available.



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

*** Section 10 - Chemical Stability & Reactivity Information ***

Stability:

This is a stable material.

Conditions to Avoid:

None known.

Incompatible Materials:

None known.

Hazardous Decomposition Products:

Sizing or binders may decompose in a fire. See Section 5 of MSDS for information on hazardous combustion products.

Hazardous Polymerization:

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Effects:

General Product Information

Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. People with pre-existing respiratory conditions, may experience difficulty breathing, congestion and chest tightness.

Carcinogenicity:

Fiber Glass Continuous Filament: The International Agency for Research on Cancer (IARC) in June, 1987, categorized fiber glass continuous filament 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 fiber glass continuous filament as a possible, probable, or confirmed cancer causing material.

The American Conference of Governmental Industrial Hygienists (ACGIH) A4 classification, not classifiable as a human carcinogen, for respirable continuous filament glass fibers is based on inadequate data in terms of its carcinogenicity in humans and/or animals.

For respirable continuous filament glass fibers, a TLV-TWA of 1 fiber/cc was adopted to protect workers against mechanical irritation. The TLV-TWA of 5 mg/m³ was adopted for nonrespirable glass filament fiber, measured as inhalable dust, to prevent mechanical irritation of the upper respiratory tract.

Note: There are no known chronic health effects connected with long term use or contact with these products.

Products that are chopped, crushed or severely mechanically processed during manufacture or use may contain a very small amount of respirable glass fiber-like fragments. NIOSH defines "respirable fibers" as greater than 5 microns in length and less than 3 microns in diameter with an aspect ratio of $\geq 5:1$ (length-to-width ratio).

Chronic Study in Animals

A laboratory test was conducted with a different product (special application glass fiber) with comparable composition and durability. Test animals breathing very high concentrations of respirable fibers on a long-term basis developed fibrosis, lung cancer and mesothelioma.



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

About 23% of the rats (n=43) exposed to 1022 f/cc for 5 hrs/day, 7 days/week for 52 weeks developed lung tumors (adenoma and carcinoma). Five percent (5%) of the unexposed control group (n=38) developed lung tumors (adenoma and carcinoma).

Five percent (5%) of the rats in the exposed group developed mesothelioma and 12.5% developed advanced fibrosis. None of the rats in the unexposed control group developed mesothelioma and 0.6 % developed advanced fibrosis.

A second group of rats was exposed to a similar concentration of asbestos (respirable amosite fibers) for 5 hours/day, 7 days a week for 52 weeks. 38% of the rats developed lung tumors (adenoma and carcinoma) and 5 % developed mesothelioma. 14.5 % developed advance fibrosis.

Importantly, this result, that is similar disease rates for the special application fiber and amosite asbestos, had been predicted in a 1996 scientific paper (Inhal. Tox. 8:323-343, 1996 ref). That paper specifically stated that in rats all fibers which were durable enough to remain in a rat lung for two (2) years or more would produce the same disease rates if the exposures were the same. While the special application fiber is much less durable than asbestos, it is stable enough to remain in the rat lung for more than the two (2) year time period. The results of the current study are therefore not unexpected, and they do not indicate that similar disease rates would be seen in longer lived species or humans, exposed to these fibers.

B: Component Carcinogenicity

Fiber Glass (Continuous Filament) (65997-17-3)

ACGIH: A4 – Not classifiable as a human carcinogen.

IARC: Group 3 “not classifiable as to its carcinogenicity to humans”
June 1987 meeting, October 2001 meeting

*** Section 12 - Ecological Information ***

No data available for this product. This product is not anticipated to harm animals, plants or fish.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions:

A: General Product Information

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not regulated for transport.

Hazard Class: None

UN/NA #: None

Packing Group: None

Required Label(s): None



Material Safety Data Sheet

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MSDS No.: 15-MSD- 21555-01

TDG Information

Shipping Name: Not regulated for transport.
Hazard Class: None
UN/NA #: None
Packing Group: None
Required Label(s): None
Additional Info.: None

Additional Transportation Regulations:

No additional information available.

*** Section 15 - Regulatory Information ***

US Federal Regulations:

A: General Product Information

No additional information available.

B: Component Analysis

No additional information available.

The following is provided to aide in the preparation of SARA 311 and 312 reports.

SARA 311/312

Acute Health Hazard: Yes
Chronic Health Hazard: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

C: Clean Air Act

The following components appear on the Clean Air Act-1990 Hazardous Air Pollutants List:

None

State Regulations:

A: General Product Information

No additional information available.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Fiber Glass (continuous filament)	65997-17-3	No	No	No	No	No	No

Other Regulations:

A: General Product Information

No additional information available.



Material Safety Data Sheet

Material Name: Woven Rovings and Fabrics

MSDS No.: 15-MSD- 21555-01

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Fiber Glass (Continuous Filament)	65997-17-3	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:
None

WHMIS Status: Not controlled

WHMIS Classification: None

* * * Section 16 - Other Information * * *

HMIS and NFPA Hazard Ratings:	Category	HMIS	NFPA
	Acute Health	1	1
	Flammability	0	0
	Reactivity	0	0

NFPA Unusual Hazards: None

HMIS Personal Protection: To be supplied by user depending upon use.

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.

Revision Summary:

This is a revised MSDS, which replaces 15-MSD-21555-01 with updated product names and new formatting. Read this information carefully.

Get OC MSDS electronically via Internet: <http://www.owenscorning.com> or by calling 1-800-GET-PINK.

This is the end of MSDS # 15-MSD-21555-01-A