



# MILLED FIBERS

### PRODUCT DESCRIPTION

OCV Milled Fibers are engineered Advantex® glass filaments that have been hammer milled into various specified bulk densities to form powders or floccular masses with specific chemical sizings to maximize end-use performance.

The filament diameter is a nominal 16u for all products unless otherwise noted.

The milling process produces a distribution of lengths.

The average of this length distribution is related to the final bulk density.

High bulk density means shorter fiber versus a low bulk density which indicates longer average fiber length.

The longer length milled fiber has a “cotton like” appearance referred to as “floccular.”



Milled Fiber – Floccular Form



Milled Fiber – Powdery Form

### PRODUCT USAGE

Milled Fibers are used as reinforcement and filler medium in plastic composites, adhesives and coatings to enhance mechanical properties, increase modulus, improve dimensional stability and minimize distortion under elevated temperatures.

The Milled Fiber may be compounded into thermoplastics using typical screw feeders. In liquid resin systems the milled fiber may be mixed in with propeller mixers or a high shear mixer in the case of milled fiber in the floccular form.

The fibers are compatible with thermoplastic materials (including Teflon\*) and thermoset materials such as polyester, phenolic, silicones and epoxy. Milled Fibers are also compatible with most asphalt, putties, patching cements and other coatings.

### PRODUCT—PRIMARY/RECOMMENDED USE

PRODUCT NAME	NOMINAL FIBER DIAMETER (µm) AVERAGE FIBER LENGTH (µm)E IN BRIEF
731	Cationic sized glass for reinforcing repair putties, molding compounds, phenolic, melamine, polyester and epoxy. Also used in thermoplastics.
737	Silane sized glass for reinforcing a variety of thermoplastics, as well as Reaction Injection Molding (RRIM) compounds.
739	Un-sized** glass for reinforcing fluoropolymers (PTFE) and other high temperature polymers where organic materials are not desired.

\* Registered trademark of DuPont Corporation

\*\* 739 products contain no measurable quantity of organic sizing.

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## AVAILABLE PRODUCTS AND THEIR PROPERTIES

PRODUCT** NOMENCLATURE	SCREEN* SIZE (IN.)	MOISTURE CONTENT (% MAX)	BULK DENSITY (GM/CC)	COLOR (WIE)	PRODUCT APPEARANCE
731EC	1/32	0.1	.65 +/- .25	n/a	Powdery
731ED	1/32	0.1	.55 +/- .10	n/a	Floccular
731ED	1/16	0.1	.30 +/- .15	n/a	Floccular
731ED	1/8	0.1	.17 +/- .05	n/a	Floccular
737BC**	1/64	0.1	1.05 +/- .20	n/a	Powdery
737BD	1/32	0.1	.60 +/- .20	n/a	Floccular
737BD	1/16	0.1	.45 +/- .15	n/a	Floccular
739DC**	1/32	0.1	1.00 min.	60 +/- 10	Powdery
739DD	1/32	0.1	.80 +/- .20	60 +/- 10	Floccular
739DD	1/16	0.1	.50 +/- .20	60 +/- 10	Floccular

\*Screen size references the hole diameter of the hammer mill screens and not the actual fiber lengths. The distribution of fiber lengths, and thus the bulk density, is controlled by the screen size.

\*\*Nominal fiber diameter for all products listed is 16.0 +/- 2 microns. Fiber diameters are controlled during the intermediate fiber forming step through process control. Actual fiber diameters are regularly audited per OCV Test Method D-02 Ce.

\*\*\*For 739DC 1/32" and 737BC 1/64," Long Fibers will not exceed 1% per OCV Test Method W-12 B-T.

## OCV TEST METHODS (COPIES AVAILABLE UPON REQUEST)

A. Bulk Density*	W-02Ca
B. Moisture*	W-05Gc
C. Color	L03A
D. Long Fibers	W-12B-T (Tyler 200 mesh @ 5 min. cycle)
E. Filament Diameter	D-02Ce

\*Certificate of Analysis data available upon request for these properties.

## VISUAL CHARACTERISTICS

Visual characteristics are defined as those characteristics which are visible to the unaided eye. Individual containers shall be free of the following:

- Contamination by dirt, oil, grease, etc.
- Foreign matter such as wood, packaging materials, etc.
- Hard lumps of nodulated fibers.
- Loose or tangled lengths of unmilled fibers.
- Discolored glass (glass should be off-white in appearance).

Note: The milling of glass fibers is an abrasive process. This process can generate small metallic particles. Although a number of powerful magnets are used at various locations in the process to remove metal, OCV cannot guarantee that the product is 100% metal free.

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## PREPARATION FOR SHIPMENT

### A. Packaging

1. The products shall be packed in containers of sufficient strength to ensure adequate protection in transit and stores.
2. Products are packed as follows:

Packaging Type	Weight (Tolerance)
Kraft Bags*	50 lb / 23 kg (+0.5/-0 lbs)
Gaylord Cartons	700-2000 lb /318-909 kg (10/-0 lbs)
Fiberboard Drums	75-254 lb /34-115 kg (+2.5/-0 lbs)

\* All products packed in Kraft bags are 50 lb /23 kg except 731 ED 1/8" which is packed in 30 lb /14 kg bags.

NOTE: All Kraft bags have poly liners. Poly bags are available with bulk cartons and fiberboard drums when specifically requested. The nominal weight of Milled Fibers in a carton or drum is dependent on the targeted bulk density of the product.

### B. Identification

The product shall be adequately identified by a content label.

### C. Storage Conditions

Milled fibers must be stored indoors in a dry location. The product should remain in its original packaging, preferably closed, until just prior to use. When stored properly, there is no known shelf life to the product however retesting is advised after three years from initial production date.

Note: If the storage temperature is less than 50°F (15°C), it would be advisable to place the pallets in the processing area for a minimum of 24 hours before use to avoid condensation.

### D. Additional Suggested Best Practices

It is recommended for 739DC 1/32" powdery milled fiber that the product be screened and heat treated prior to use in PTFE to insure good dispersion and compound color. Exposure to heat, moisture, humidity and pressure during storage and transportation can cause this product to agglomerate in the packaging. Any trace quantity of organics on the glass can cause the formation of carbon deposits when exposed to the processing temperatures of PTFE in an oxygen starved environment. More detail available upon request.

## SPECIAL PRECAUTIONARY NOTE

In the event that Owens Corning or the customer has reason to suspect that shipment may contain out of spec material, the party first suspecting such condition will notify the other, and Owens Corning will assume responsibility for initiating appropriate action. The use of the suspect material should be is continued pending an investigation of the facts.

Note that OCV™ Reinforcements must be notified of any quality issue within six months of receipt of Material to enable problem analysis and resolution.

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