



495 Roving

Advantex® Glass Fiber

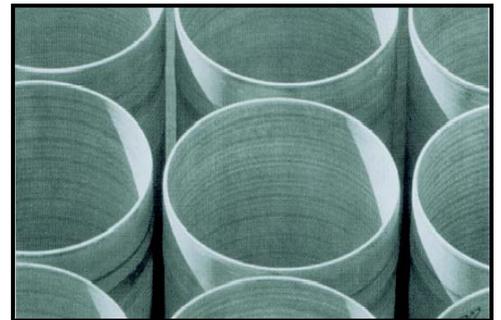
PRODUCT DESCRIPTION

495 conventional roving is manufactured with state-of-the-art equipment, innovative chemistry and a major commitment to statistical process control. The quality Management Program of Owens Corning manufacturing is certified as meeting the requirements of ISO 9002. Owens Corning 495 roving is manufactured from a collection of continuous glass filaments gathered, without mechanical twist, into a single bundle. The roving is then wound and shipped in a tubeless package ready for use in customer continuous operations.



PRODUCT APPLICATION

The “495” designation refers to a high performance sizing that has proven world wide acceptance in a multiple range of highly demanding applications such as pipes or tanks for wastewater treatment and chemical outlets. 495 roving is also suitable in panel laminating or can be used as choppable roving in reinforced complexes. The 495 sizing is compatible with polyester and vinyl ester resin systems.



FEATURES

- Corrosion resistance
- Low static and fuzz/excellent runnability
- High laminate properties
- High package and pallet weight

BENEFITS

Quality and Consistency

Statistical process control is applied to the 495 roving manufacturing process to help ensure consistent quality lot-to-lot and doff-to-doff. Every aspect of the manufacturing process is under control and analyzed for never-ending improvement.

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BENEFITS (contd)

Corrosion resistance

By using 495 roving, composites applications, such as GRP pipe, can last longer and have effective service life. Fabricators can avoid the extra cost of linings, coatings, cathodic protection, wraps or other forms of corrosion protection. Moreover, lower maintenance costs can be expected when using 495 versus standard products on the market. Finally, hydrolytic characteristics have essentially shown to be constant over time when using 495 roving.

Low static and Fuzz - Excellent Runnability

Owens Corning's unique manufacturing process results in a roving with unparalleled runnability from package to mold. The strand chemistry for the 495 roving is specifically designed to virtually eliminate static and reduce fuzz/fly (broken filaments at contact points). This minimizes interruptions and improves overall productivity, while enhancing operator comfort and safety.

Microprocessor controlled yield, coupled with unrivaled packaging ensure smooth and consistent glass delivery.

High laminate properties

Owens Corning 495 roving is manufactured from a glass formulation yielding excellent mechanical properties in both standard and corrosive media. The 495 chemical treatment is based on silane coupling agents to ensure excellent bond between the glass fibers and a wide range of polyester and vinylester resins. Statistical process control in the application and curing of the 495 sizing helps to ensure consistently high mechanical properties in the finished laminates.

495 laminates, based on general purpose, isophthalic and vinylester resins, exhibit mechanical properties equal to or better than other competitive rovings. The strong bonding between the glass fibers and the resin matrix, due to the 495 chemistry, is highly resistant to hydrolytic attack. This makes 495 a roving of choice for highly demanding applications in the construction and corrosion applications.

High package and pallet weight

The large package size (30 cm/12 in diameter) reduces material handling costs, while the Bulk-Pak packaging system minimizes packaging and waste disposal. More product per package allows longer run time before more material is needed at the roving station.

PACKAGING BULK PACK (2 cells)

Pallet Dimensions

Pallet height, cm (in)	91 (36)	or	115 (46)
Pallet length, cm (in)	128 (51)		
Pallet width, cm (in)	95 (38)		
Number of layers	3	or	4
Pallet weight net, kg (lb)	720 (1585)	or	960 (2112)

Carton Doff information

Doff height, cm (in)	25 (10)		
Doff length, cm (in)	20 (44)		
Doff width, cm (in)	30(12)		
Doffs per layer	12		
Doffs per pallet	36	or	48

Each roving ball can be removed as an individual unit. The ends are not tied together.

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COMBINED LAMINATE PROPERTIES

495 roving in 3 resins @ 30-33% w/w Glass fibers (Reference report on file with Roving Product Engineer)

(typical properties in general purpose polyester resins)

Property	Dry Range, psi		Dry Range, Mpa	
Tensile strength (ASTM D-638)	17000	20000	117	138
Tensile modulus (ASTM D-638)	1100000	1300000	7584	8963
Flexural strength (ASTM D-790)	31000	35000	214	241
Flexural modulus (ASTM D-790)	1100000	1300000	7584	8963

Property	Wet Range, psi		Wet Range, Mpa	
Tensile strength (ASTM D-638)	15000	18000	103	124
Tensile modulus (ASTM D-638)	1000000	1200000	6895	8274
Flexural strength (ASTM D-790)	25000	29000	172	200
Flexural modulus (ASTM D-790)	1000000	1200000	6895	8274

Indicates testing after 2'-hour boiling condition. The final selection of any rovings for molding process is dependent upon the process techniques of the composites manufacturer and the performance requirements of the finished product. Each roving, therefore, should be evaluated for its own specific characteristics and cost/performance benefits, which dictate where and when the product is most applicable.

Product Data

Strand treatment	Polyester compatible sizing
Ignition loss	1.50% (nominal)
Roving yields 2400 TEX	207 yd/lb

Process Data

495 roving is designed for use in the 20-40% glass content range for standard resin systems. In filled systems, glass contents range from 10-25%, depending on the resin systems and the part shape.



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