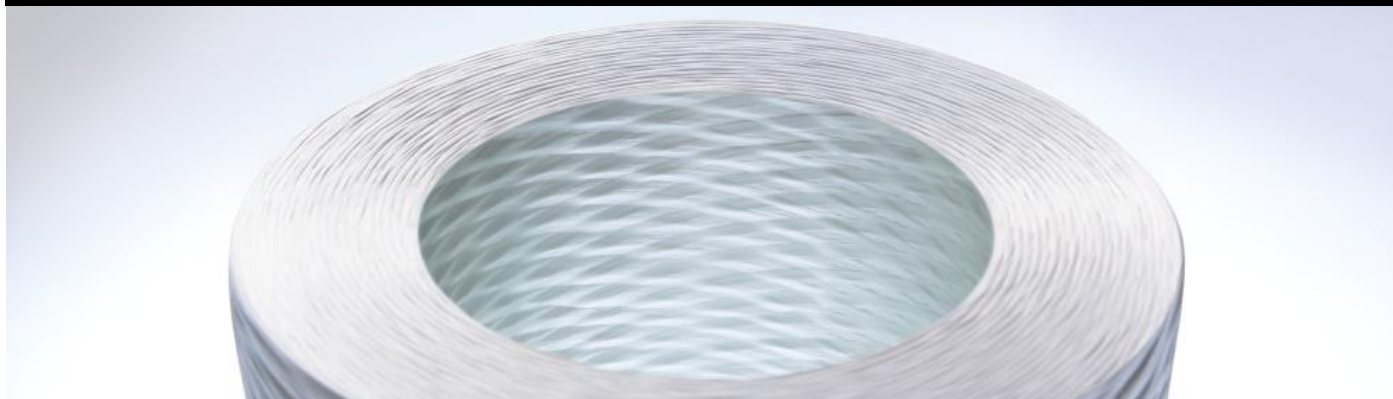


PIPESTRAND™ S1000

SINGLE-END ROVINGS FOR HIGH PERFORMANCE LOW PRESSURE FILAMENT-WOUND APPLICATIONS



DESCRIPTION

- PipeStrand™ S1000 single-end rovings are designed to provide excellent hydrostatic design basis results for long installed pipe, tank and vessel service life (+20-50 years).
- PipeStrand™ S1000 roving provides excellent performance in axial tensile strength, interlaminar shear strength and burst stress for filament wound polyester, vinyl ester, epoxy and polyurethane applications. This new Type 30™ reinforcement made with corrosion resistant Advantex® E-CR glass, provides excellent corrosion resistance and increased service life in the filament-wound pipe, tank and vessels, installed in the field. It also helps reduce material cost and pipe waste for the pipe industry. Advantex® glass offers the unique attributes of being both a boron-free E-glass and an E-CR glass in accordance with ASTM D578 and ISO 2078.
- PipeStrand™ S1000 single-end rovings are produced in manufacturing facilities certified to ISO 9001.

BENEFITS

- Excellent hydrostatic design basis results, leading to longer potential pipe, tank and vessel service life
- Designed for use in filament winding pipes, tanks and vessels with polyester, vinyl ester, epoxy and polyurethane resin, giving design flexibility with one glass input
- Advantex® Glass provides superior corrosion resistance vs. standard E-glass, leading to longer part life and greater part strength in applications facing corrosion
- Minimizes downtime due to easy processing, maximum wet out and saturation consistency, resulting in potential improved mechanical properties, potential increased productivity, and potential improved manufacturing costs
- Provides superior properties in shear strength properties, critical to the design and performance of pipe, tank and vessel applications
- Allows use in potentially broader customer processing conditions, giving flexibility to potentially lower resin use
- Excellent processing and mechanical properties in multiple resin systems allows for potentially lower inventory and time for creel changes, which may lead to less downtime and increased cash flow
- Lower resin demand can lead to increased glass content, higher mechanical properties and lower pipe material cost



APPLICATIONS

PipeStrand™ S1000 roving is specifically designed to match the unique needs of the low pressure filament winding market. Compatible with polyester, vinyl ester, epoxy and polyurethane resins, it serves a variety of applications: water distribution (water desalination, water treatment, sewage), industrial (petrochemical), transportation (marine), infrastructure (light poles) and power/energy (LPG). PipeStrand™ S1000 products can meet pipe user requirements for high mechanical properties, durability, corrosion resistance, and low weight. PipeStrand™ S1000 Rovings allows fast wet out, low fuzz, and smooth visual aspect.



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PRODUCT AVAILABILITY

Yield	Tex
827 – 413 – 250 – 207 – 103	600 – 1200 – 2000 – 2400 – 4800

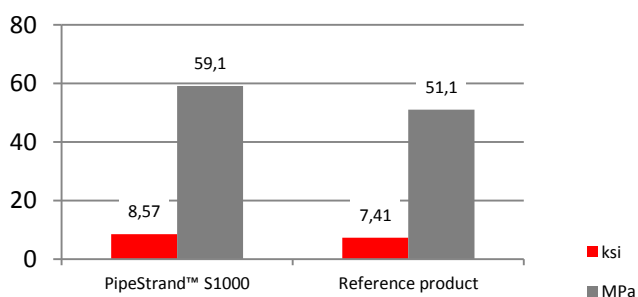
COMPATIBILITY

Epoxy	Polyester	Vinyl ester	Polyurethane
x	x	x	x

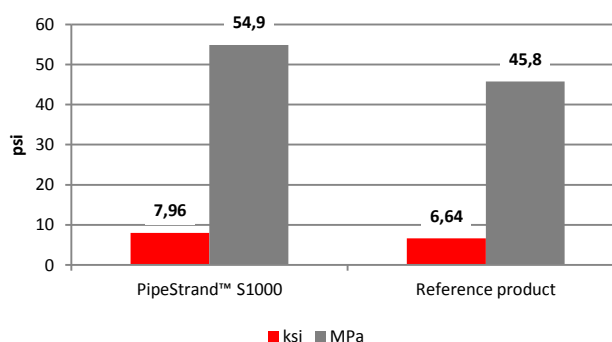
MECHANICAL PROPERTIES

The following data was generated comparing PipeStrand™ S1000 rovings to a global standard product used in the same applications. The data demonstrates shear strength (ksi, MPa) using ASTM D2344. PipeStrand™ S1000 rovings show a nearly 15-20% improvement over the reference products in tested properties in polyester and vinyl ester, respectively.

Shear Strength - Polyester



Shear Strength - Vinyl Ester



Laboratory sample: Mechanical testing lab | Resin package: Polyester, Vinyl Ester | Test method: ASTM D2344 | Test property: Shear Strength | Units: ksi, MPa

PACKAGING

Rovings are available in a single-end internal-pull package. Pallets are stretch wrapped for load stability. All doffs are wrapped with Tack-Pak™ or shrinkable film for protection during transport. More information is available in the Customer Acceptance Standards.

STORAGE

It is recommended to store glass fiber products in a cool, dry area. The glass fiber products must remain in their original packaging material until the point of usage. The product should be stored in the workshop in its original packaging, 48 hours prior to its utilization, to allow it to reach the workshop temperature condition and prevent condensation, especially during the cold season. The packaging is not waterproof. Be sure to protect the product from the weather and other sources of water.

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