

VISCOTAQ[®] PU-Composite wrap

Product data sheet

Product description

VISCOTAQ PU-Composite Wrap is a composite system comprised of a proprietary polyurethane formula and custom-woven biaxial glass fiber for mechanical protection and reinforcement of VISCOWRAP Inner Wrap furnished factory-impregnated with proprietary 22-77 resin system. PU Composite Wrap is an odorless and non-flammable, durable, high strength material, impervious to fuels, most chemicals and solvents. It permanently bonds to a wide variety of surfaces such as metals, composites, concrete, plastics and wood and is certified to ANSI/NFS Standard 61. As a biaxial fabric, it provides strength in two directions, hoop and transverse. For piping, hoop strength is critical, but handling the transverse load is also important. Adhesion to the surface without primer. Continuous temperature resistance in combination with VISCOWRAP is 100° C/212° F.



General information

VISCOTAQ is a unique viscous-elastic non crystalline a-polar polyolefin for the protection of shaped and non-shaped substrates. VISCOTAQ offers the pipeline industry an unrivaled technology when it comes to corrosion prevention. Unlike other coatings VISCOTAQ always has a permanent and intimate contact with the surface of a substrate. The viscosity and elasticity modulus of the material are designed in such a way that the viscosity modulus provides permanent wetting characteristics hence forcing the material to flow into the pores and anomalies of the substrates whereas the elasticity modulus provides the strength and elasticity of a solid.

Use and application

- Temperature range -42,9° C/-45,26° F up to +100° C/+212° F
- Continuous operating temperature up to 100° C/+212° F
- Application temperature > +5° C/+41° F
- Surface preparation free of loose particles, dust, debris

Features

- Ready to apply pre-packed bags
- Very high chemical resistance
- Very high temperature resistance
- Curing by field applied water
- Available in several widths
- No mixing of resins on site



Measurement	Value	Method
Glass transition temperature	142,92° C/288° F	DSC, ASTM E1356-08
Working time	60 minutes package open time depending on ambient humidity	
Cure time	30 minutes nominal after water application	
Chemical resistance	Resistant to acetone, mek, toluene, gasoline, ethyl alcohol	
Adhesion	1.000 PSI (lap shear) to abraded carbon steel 500 PSI to concrete	
Reinforcement	Woven glass bi-axial fabric	
Nominal thickness	11 mils	
Maximum load	580 lbf	ASTM D2344
Tensile strength	65.000 PSI	ASTM D3039-00
Tensile Modulus	3574 PSI	ASTM D3039-00
Water absorption	< 1%	ASTM D570-98
Material state	solid	NA
Flexural strength	42440 PSI	ASTM D3039-00
Flexural modulus	3164	ASTM D3039-00
Compressive strength	28.500 PSI	
Hardness (total system)	76-82 Shore D	ASTM D2538
Interlaminar shear	3223 PSI	ASTM D2344
Shelf life	1 year	
Application temperature	Above +5° C/+41° F	

PU-COMPOSITE WRAP is readily available in several widths and roll lengths. PU-COMPOSITE WRAP is shipped in a sealed protective bags to protect it from atmospheric moisture. Because it cures with the application of water (and air humidity), care must be taken in handling the sealed bags to prevent puncturing or scuffing them which would cause the product to cure in the bag. Once the bag is exposed to humidity in the air, it will begin to cure and will gel with 60 minutes. Therefore, work must be well planned prior to opening the bag. This resin may irritate skin. It will give off a small amount of carbon dioxide vapor while curing. The cured resin is permanent and very difficult to remove, so gloves, safety glasses and other personal protective gear appropriate for the task must be used.

Testing was performed by Charter Coating Service Laboratories, Calgary, Canada. Charter Coating is an ISO17025 certified laboratory. Copies of reports are available upon request.



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