



## VISCOWRAP-ST

### Product data sheet

#### Product description

VISCOWRAP-ST is a non crystalline a-polar viscous elastic solid polyolefin coating in roll form used for the protection of under- and aboveground substrates against corrosion. VISCOWRAP is a 2-layer system that consists of a corrosion protective inner wrap (VISCOWRAP) and mechanical protective outer wrap that can be a PE, PVC or PU composite outer wrap.

#### General information

VISCOTAQ is an 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 gives permanent wetting characteristics hence forcing the material to flow into the pores and anomalies of the substrates whereas the elasticity modulus gives the strength and elasticity of a solid.

#### Use and application

- Temperature range  $-42^{\circ}\text{C}/-43^{\circ}\text{F}$  up to  $+71^{\circ}\text{C}/+160^{\circ}\text{F}$
- Continuous operating temperature up to  $60^{\circ}\text{C}/+140^{\circ}\text{F}$
- Application temperature  $> +5^{\circ}\text{C}/+41^{\circ}\text{F}$
- Surface preparation minimum SSPC-3/ST-3
- Recommended surface preparation SA 2-1/2 or SSPC-10.
- Application minimum  $+3^{\circ}\text{C}/+37,4^{\circ}\text{F}$  above dew point

#### Features

- Melting point  $+152,8^{\circ}\text{C}/+307,04^{\circ}\text{F}$ .
- Glass transition temperature  $-42,92^{\circ}\text{C}/-45,26^{\circ}\text{F}$ .
- CD value 0-3 mm at  $+23^{\circ}\text{C}/+73,4^{\circ}\text{F}$
- Self healing in case of small damages.
- 100% impervious to moisture and gases.
- Adhesion to the substrate without primer.
- Remaining flexibility over decades.
- Easy in use; can be cut and paste.
- Permanent wetting characteristics.
- Eliminates Microbiological Induced Corrosion (MIC).
- No curing time.
- Extreme high chemical resistance.
- No sensitivity to salts and osmosis.
- Cohesive fracture.
- 100% inert formulation : no reactive groups and no deterioration in the course of time.
- 30 years product warranty.





Measurement	Value	Method
Glass Transition Temperature	-42.92 °C/-45.3 °F	ASTM E1356-03
Material State	Solid	NA
Density	1.1-1.4	DIN 53479
Thickness	>1.8 mm/ >70 mils	ISO 4593:1993(E)
Melting Point	152.09 °C/306 °F	ASTM E1356-03
Yield Point	Yes	ISO 3219
Water Vapor Permeability	< 4 *10 <sup>-4</sup> g/day/m <sup>2</sup> /Pa	ASTM E96/96M-10
Water Absorption	3.7 g/m <sup>2</sup> or 0.0013 g/g	ASTM D570-98 (2010)
Water penetration	<0.14% (1800 hrs, 6V, 3% NaCl)	ASTM G9-87
Cathodic Disbondment	0-3 mm (self-healing)	ASTM G8-96
Dissipation factor	<0.15 (1500 hrs, 20 kHz)	ASTM G9-98
Pore Resistance	Rp0/Rp1 <1.5	EIS Spectroscopy
Volume Resistivity	>2.2* 10 <sup>13</sup> ohm*cm	ASTM D257-07
Surface Resistivity	>5.6* 10 <sup>15</sup> ohm*m <sup>2</sup>	ASTM D257-07
Dielectric Strength	>17.5 kV/mm	ASTM D149-09
Tensile Strength	222 N/cm	ASTM D638
Impact Strength	> 15 J (immediate) > 18 J (self-healing, 96 hours)	EN 12068:1998 Annex H
Indentation	No holidays	EN 12068:1998 Annex G
Peel Adhesion (total system)	0.06 kN (cohesive fracture)	ASTM D1000
Soil stress test 23 °C	No movement	Alyeska Shear modified to full ring, 18.6 kg load, 6.8 kg force
UV/Weather cycle test	Excellent, rating 10	ASTM D4587, 1000 hours
Wet Adhesion Test	Excellent	CSA Z245-20-06 Sec. 12.14
Flexibility	No cracking	CSA Z245-20-06 Sec. 12.11
Simulated aggressive soil	No signs of deterioration, 72 hours, 70 °C	Sol. 1) H <sub>2</sub> SO <sub>4</sub> : 30% Sol. 2) HNO <sub>3</sub> : 10% Sol. 3) H <sub>3</sub> PO <sub>4</sub> : 20% Sol. 4) HCl: 10%
Smoke and Flame Spread	Class A Flame spread 0, Smoke 25 (system includes stainless steel foil)	ASTM E84

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



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