Visco-Elastic Tape

Monolithic viscous polymer pre-wound coating

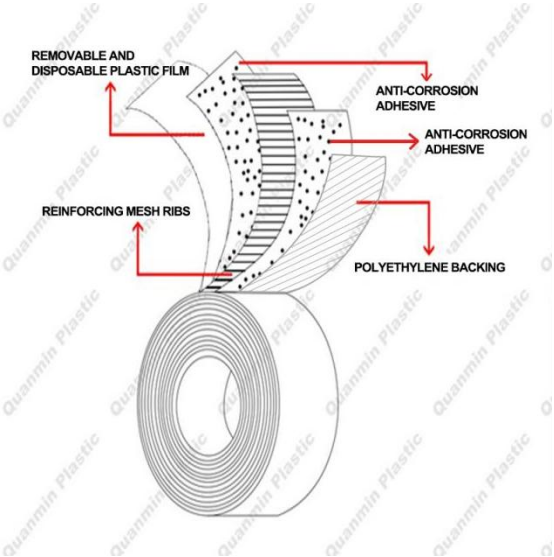
Features

- Minimal surface preparation required
- No primer needed
- Self-healing repair
- No drying or hardening time
- No cathode delamination
- Wide range of thermal resistance (adaptable to a broad temperature range)

Our Visco-Elastic Tape is an amorphous, non-polar, viscoelastic, semi-solid polyolefin-coated tape. It comprises a polyethylene backing, anti-corrosion adhesive, reinforcing mesh ribs, an additional layer of anti-corrosion adhesive, and is covered with a removable and disposable plastic film. The Visco-Elastic Tape offers excellent corrosion protection and waterproofing for above-ground or underground steel pipelines and steel structural facilities. It is compatible with multiple surfaces, including cement, asphalt, PE, PP, FBE, PVC, etc., and fully complies with NACE 0109:2019 and ISO 21809-3:2016 standards.

Description

Our Visco-Elastic Tape is available in three temperature variants: LT50℃ (122℉), HT75℃ (167℉), and XHT105℃ (221℉), to better suit your application requirements. As an inner layer for corrosion protection, the Visco-Elastic Tape requires mechanical protection from an outer wrapping of PVC or PE tape (for details, please refer to the PVC or PE outer wrapping tape product datasheet) to enhance resistance to external stress. The Visco-Elastic Tape coating system has a wide range of applications, including: coating for new pipeline construction; transition zones of underground pipelines; special sections such as bends, tees, and flanges; and rehabilitation of in-service pipelines.



Project	9050 LT	9075 HT	9105 XHT	Test Method
Thickness	2.0 ± 0.2mm (80 ± 0.8mils)			ISO 28605
Density	1.5 ± 0.1g/cm^3 (12.5 ± 0.8lbs/gal)			ISO 1183
Mass/Area	3.0 ± 0.3kg/m^2 (0.64lbs/sq.ft)			ISO 9864
Glass Transition Temperature	≤-60°C (-76°F)			ASTM E1356
Thermal Resistance	+70°C (+158°F)	+95°C (+203°F)	+125°C (+257°F)	ASTM D5470
Application Temperature Range	-45 to +50°C (-49 to +122°F)	-45 to +75°C (-49 to +167°F)	-45 to +105°C (-49 to +221°F)	ASTM D3418
Drip Resistance	48h at +125°C (+266°F) No dripping	48h at +130°C (+275°F) No dripping	48h at +155°C (+311°F) No dripping	ASTM D2196
Elongation	≥100%			ASTM D1000
Specific Electrical Insulation Resistance	Rs 100 ≥ 108Ω.m^2 (≥109Ω.ft^2)			ASTM D257
Holiday Detection	15.5kv No holidays			ASTM D149
Volume Resistivity	2.2x10^{13}Ω·cm (8.7x10^{12}ohm·in)			ASTM D257
Water Vapor Permeability 24h, at +23°C (+73.4°F)	3.5x10^{-4}g/daymF/Pa (4.94×10^{-4}lb/day/ft^2/ps)			ASTM E96
Water Absorption 24h, at +23°C (+73.4°F)	0.028%			ASTM D570
Peeling of Carbon Steel and Plant Coating PE/PP/FPE	at -45°C (-49°F) 0.8N/mm (70.1ozf/in) at +23°C (+73°F) 0.05N/mm (4.57ozf/in) at +50°C (+122°F) 0.03N/mm (2.74ozf/in)	at -45°C (-49°F) 3N/mm (274.1ozf/in) at +23°C (+73°F) 0.3N/mm (27.41ozf/in) at +75°C (+167°F) 0.05N/mm (4.57ozf/in)	at -45°C (-49°F) 5.8N/mm (529.9ozf/in) at +23°C (+73°F) 0.6N/mm (54.81ozf/in) at +105°C (+221°F) 0.08N/mm (7.27ozf/in)	ASTM D3330

Thermal Aging Peel Strength	+70°C (+158°F) hot water down 100 days. at +23°C (+73°F) 0.04 N/mm (3.65ozf/in) at +50°C (+122°F) 0.03N/mm (2.74ozf/in). In all cases cohesive separation mode and ≥ 98% coverage of surface. ≥0.6mm Residual thickness.	+95°C (+203°F) hot water down 100 days. at +23°C (+73°F) 0.26N/mm (23.8ozf/in) at +75°C (+167°F) 0.04N/mm (3.65ozf/in). In all cases cohesive separation mode and ≥ 98% coverage of surface. ≥0.6mm Residual thickness.	+125°C (+257°F) hot water down 100 days. at +23°C (+73°F) 0.51N/mm (46.6ozf/in) at 105°C (+221°F) 0.07N/mm (6.4ozf/in) In all Cases cohesive separation mode and ≥ 98% coverage of surface. ≥0.6mm Residual thicknes.	ASTM D3161
Available Roll Size (Width * Length)	50 to 300mm X 10 to 20m (1.97 to 11.81in X 32.81 to 65.2ft)			
Color	Green/Blue			

Storage and Shelf Life

This product should be stored indoors in a clean, dry, and well-ventilated area, away from direct sunlight. Keep the boxes upright with stacking height ≤ 5 layers. The same environmental conditions must be maintained during transportation. Storage temperature range: +4°C to +40°C (40°F to 104°F). Shelf life is unlimited.

General Requirements for Applications

General: The area to be coated has to be cleandry, and free from oil, grease and dust. All contamination including mill-scale has to be removed.

Degreasing: Degrease surfaces with Toluene or Heptane and e.g. a lint-free cloth.

Preventing Condensation of Water: Before and during construction, the working surface. Temperature must always remain at least 3°C (37.4°F) above the dew point temperature.

Working Surface Temperature: At temperatures above 0°C (32°F), the operating surface temperature should be maintained between +20°C to +40°C (68°F to 104°F), with preheating treatment required when necessary.

* Asphalt surface: Remove loose asphalt. Ensure the surface is clean and dry for good adhesion. Heat the surface to +60°C (140°F).

Special handling: For the concave areas of spiral welded pipes and fittings, use our Visco-Elastic Filler Paste or viscous-elastic filler strips as filling materials.

Application Instruction

Step 1

Minimum surface preparation should be ISO 8501-1 ST2/SSPC-SP2 (Hand Tool Clean). Thoroughly remove any loose material, then clean the residue with toluene or heptane using a lint-free cloth.

Step 2

Remove the release liner and place the adhesive side onto the substrate (pipe). The initial wrap should be a straight circumferential wrap. Once completed, wrap the pipe with slight tension and a minimum of ½" overlap. Wrap at an angle to create a smooth overlap and to ensure no air pockets are formed during wrapping. End wrapping with a straight circumferential wrap. For coating repairs and diffi cult to reach areas Visco-Elastic Tape can be applied in pieces, strips, or individual circumferential wraps (cigarette wrap).

Step 3

After wrapping o Visco-Elastic Tape is completed, immediately begin wrapping over the Visco-Elastic Tape with PE Outerwrap or PVC Outerwrap to complete the Visco-Elastic Tape Coating System.

Step 4

PE Outerwrap or PVC Outerwrap is applied in the following manner:

• PE Outerwrap or PVC Outerwrap should be wrapped with tension and a minimum of 50% overlap.

• The first and termination wraps should be a straight circumferential wrap.

• A ¼" section of Visco-Elastic Tape should still be visible at each end of the outer wrap application.

Step 5

Perform holiday detection per NACE SP0274 Handling and commissioning.

Friendly Reminder

1. The Visco-Elastic Tape coating system must not bear external force loads from supports or lifting equipment. Non-bonded outer wrapping materials may be selected for enhanced protection, such as: Non-woven polypropylene blanket, Non-woven polypropylene blanket, etc.

2. The backfill should be kept clean and should not contain any foreign matter that could damage the coating system.

For more technical inquiries, please visit our website.

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