

ViscoMastic

Amorphous, Apolar, Visco-Elastic, Semi-Solid, Polyolefin Mastic

Description

ViscoMastic is an amorphous, apolar, visco-elastic, semi-solid, polyolefin mastic for corrosion prevention of underground and aboveground substrates. It is part of the Viscotaq coating system which consists of a conformable mastic, a corrosion protective layer (ViscoWrap ST, HT or Viscotaq EZ Wrap) and a mechanical protective outer layer, if needed. This coating system offers exceptional corrosion prevention and waterproofing for a variety of substrates.

Uses

- Mastic for concrete, steel, PVC, metal, wood, vinyl, and other coatings
- Soil-to-air transitions
- Pipe, flanges, valves and fittings
- Girth welds
- Buried pipelines with minimal surface preparation
- Can be used with ViscoWrap ST, HT or Viscotaq EZ Wrap
- Waterproofing of gravity-fed pipes, manholes, seams, penetrations, and cracks
- CUI applications
- End seal for pipe casing
- Tank chimneys
- Waterproofing for bell and spigot joints

Features

- Impermeable to moisture and gases
- Immediate adhesion to substrate / permanent wetting characteristics
- No primer needed
- Easy to apply, no mixing or messy clean-up
- Minimal surface preparation required (SP2-wire brush)
- Self-healing characteristics
- Inert material, no deterioration over time
- Resistant to aggressive soil conditions such as water, acid, salts, or soil organics
- Quick long-term protective coating, ready for immediate service
- Contains no solvents, no carcinogens, non-toxic, non-flammable
- Contains fire retardant materials and self-extinguishing
- UV resistant and never cracks or becomes brittle
- Flexible, pliable, conforms to irregular shapes easily
- Freeze / thaw resistant
- Thermal resistance -45°F to 158°F (-45°C to 70°C)
- Ability to fill voids and anomalies of substrate
- Meets NACE 0109:2019 and ISO 21809-3:2016
- Available in high temperature grade



TECHNICAL DATA SHEET

Surface Prep

Surface preparation should include the following:

- Surface inspected prior to application with any defects documented.
- Minimum surface preparation should be ST2/SSPC-SP2 (Hand Tool Clean).
- Once loose material is removed, clean surface with denatured alcohol or acetone to remove any remaining dust, grease and moisture.
- Surface of substrate should be 5°F (3°C) or greater above the dew point.
- Keep the working area clean and dry at all times. Avoid the presence of water.

Any adjacent coating should be roughened by means of sandpaper or a grinding machine, if applicable. Suggested overlap onto the existing coating is 4" – 6".

Application

ViscoMastic is applied in the following manner:

- Remove the release release liner and place onto the substrate.
- Press and mold the ViscoMastic against substrate to ensure good adhesion and conformity to the substrate.
- Once completed, place or wrap over the ViscoMastic using strips or rolls of ViscoWrap or EZ Wrap to completely cover it.
- Make sure that the wrap transitions onto the surrounding substrate.

After wrapping of ViscoMastic is completed, immediately begin wrapping over the ViscoWrap with PE Outerwrap or PVC Outerwrap to complete the Viscotaq Coating System. PE Outerwrap or PVC Outerwrap is applied in the following manner:

- PVC Outerwrap or PE 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 ViscoWrap should still be visible at each end of the Outerwrap application.

Denso Glass Outerwrap™ can be used in place of or in addition to the PVC Outerwrap or PE Outerwrap when additional mechanical protection is required. Glass Outerwrap is applied in the following manner:

- Do not open the foil pouch until ready to apply product.
- Once ready to apply the Denso Glass Outerwrap, remove from the hermetically sealed, foil pouch using protective gloves and place in room-temperature water (salt or fresh) for 20-30 seconds. The roll should be immersed in water for a longer time when the environment is cold and/or dry.
- Remove and begin wrapping the surface tightly, overlapping a recommended 50% (55% for severely corrosive environments).

TECHNICAL DATA SHEET

- After wrapping is completed, immediately begin wrapping Denso Poly-Wrap™ the same direction the layers of Denso Glass Outerwrap were applied to compress it quickly and with tension applied.
- Overwrap each end of the Denso Glass Outerwrap by at least 2 inches (50 mm) to ensure the ends lay flat and the resin is retained.
- Once compressed, use the Denso Perforating Tool to puncture the Denso Poly-Wrap. This will allow for excess resin, moisture, and carbon dioxide from the reaction to escape. Apply only enough pressure to puncture the Poly-Wrap and not the layers of Glass Outerwrap.
- When the material has cured, the Denso Poly-Wrap may be removed. Cure can be checked by using a Shore D gauge on a high point of the resin (avoid measuring near ridges and fibers as the gauge tip can move). The product is ready to be used at a Shore D of 65 or greater.

Cold Weather Installations: Follow normal procedure but add ethylene glycol in the water to prevent freezing and to progress the curing process.

Hot Weather Installations: Follow normal procedure but use ice water to slow down the curing process to allow more working time for installation.

Storage

Store in a dry, well-ventilated area between 40°F and 140°F (4°C to 60°C) in original, unopened containers. Shelf life is unlimited under these conditions. It is recommended that all components be stored between 68°F to 86°F (20°C to 30°C) for 24 hours prior to use for optimum product application characteristics.

Due to the adhesive nature of the product, release films / papers should be kept in place during storage and whenever the material is placed on its side after removal from the case.

Packaging

*Mastic Width x Thickness	*Mastic Length	*Rolls/Sticks Case	*Approx. Fill Weight Per Case
in.	in. & ft.	ea.	lbs.
(Rolls) 0.75" x 0.75" (19.1 mm x 19.1 mm)	20' (6.1 m)	6 Rolls	34 lbs (15.4 kg)
(Sticks) 1.5" x 1.25" (38.1 mm x 31.8 mm)	20" (0.508 m)	27 Sticks	32.5 lbs (14.7 kg)

*Mastic dimensions and single unit counts are nominal and may vary within a case.

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TECHNICAL DATA

PROPERTIES	ENGLISH	METRIC
Material State	Semisolid	<i>Semisolid</i>
Density (DIN 53479)	1.1-1.4	1.1-1.4
Glass Transition Temperature (ASTM E1356-03)	-45.26°F	-42.92°C
Softening Point (ASTM E1356-03)	306°F	152°C
Water Vapor Permeability (ASTM E96/96M-10)	<5.6 x 10 ⁻⁴ lb/day/ft ² /psi	<4 x 10 ⁻⁴ g/day/m ² /Pa
Water Absorption (ISO 62)	<0.03%	<0.03%
Cathodic Disbondment at 73°F (23°C) (ASTM G8-96/ISO 21809-3)	0 mm (Self-healing)	0 mm (Self-healing)
Cathodic Disbondment at 122°F (50°C) (ASTM G8-96/ISO 21809-3)	0 mm (Self-healing)	0 mm (Self-healing)
Volume Resistivity (ASTM D257-07)	>8.7 x 10 ¹² ohm*in	>2.2 x 10 ¹³ ohm*cm
Surface Resistivity (ASTM D257-07)	>6.0 x 10 ¹⁶ ohm*ft ²	>5.6 x 10 ¹⁵ ohm*m ²
Thermal Resistance	-45°F to 158°F	-45°C to 70°C
Dielectric Strength (ASTM D149-09)	>445 KV/in	>17.5 kV/mm
Impact Strength (ISO 21809-3 (2016) Annex D)	>133 in-lb _i	>15 J (Immediate)
Indentation (ISO 21809-3 (2016) Annex E)	No holidays	No holidays
UV/Weather Cycle Test (ASTM D4587, 1000 Hours)	Excellent, rating 10	Excellent, rating 10
Wet Adhesion Test (CSA Z245-20-06 Sec. 12.14)	Excellent	Excellent
Chemical Resistance in Aggressive Soils Tested in Sulfuric Acid (30%), Nitric Acid (10%), Phosphoric Acid (20%), Hydrochloric Acid (10%)	Excellent No deterioration, 72 hours at 158°F / No corrosion, 72 hours at 158°F	Excellent No deterioration, 72 hours at 70°C / No corrosion, 72 hours at 70°C

Page 4 of 4



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