



Application Guideline

1.0 SCOPE

This document contains general instructions and recommended practices for the application of Longwrap wax/petrolatum coating systems. The various coating grades discussed in this document are used for the corrosion protection of piping, girth welds, fittings, pipe reconditioning and pipe fabrication for above and below grade environments. The specifics of where the product can be used are detailed in Section 2.0. For assistance in coating selection, surface preparation, application or inspection, please contact a Chase Protective Coatings Representative.

2.0 MATERIALS

2.1 Longwrap Petrolatum Paste - A VOC free, cold applied, wax based primer designed to wet out the surface prior to installation of all grades of Longwrap Petrolatum Tape and LD Mastic. Longwrap Petrolatum Paste will help to protect piping and metal structures from damage and deterioration caused by corrosion. Longwrap Petrolatum Paste can be used on sweating and wet substrates

2.2 Longwrap Petrolatum Tape - A 1.15 mm VOC free, cold applied, wax based tape designed to protect piping and metal structures from damage and deterioration caused by corrosion. The Temperate grade provides protection at operating temperatures up to 55°C (131°F) and the Tropical grade provides protection at operating temperatures up to 70°C (158°F). This coating is appropriate for use below grade in dry, damp or wet operating conditions. The Longwrap Petrolatum Tape encapsulates the surface in order to protect it, this allows for easy inspection of the substrate and repair of the coating. The tape is used with the Longwrap Paste which completely wets out the substrate surface and displaces any moisture.

2.3 Longwrap Hotcote Petrolatum Tape - A 1.15 mm VOC free, cold applied, wax based tape designed to protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 120°C (248°F). This coating is appropriate for use below grade in dry, damp or wet operating conditions. The Longwrap Hotcote Petrolatum Tape encapsulates the surface in order to protect it, this allows for easy inspection of the substrate and repair of the coating. The tape is used with the Longwrap Paste which completely wets out the substrate surface and displaces any moisture.

2.4 Longwrap Marine Petrolatum Tape - A 1.3 mm VOC free, cold applied, wax based tape designed to protect marine pilings, offshore riser pipes and similar marine structures, particularly in aggressive tidal and splash zones. This coating is appropriate for use below grade in dry, damp or wet operating conditions. The Longwrap Marine Petrolatum Tape encapsulates the surface in order to protect it, this allows for easy inspection of the substrate and repair of the coating. The tape is used with the Longwrap Paste which completely wets out the substrate surface and displaces any moisture.

2.5 Longwrap Mastic Blanket - A VOC free, cold applied, pre-formed layer of petrolatum mastic coated onto a petrolatum impregnates polyester fabric carrier. Mastic Blankets provide a convenient, easy to apply method of protecting industrial fittings and irregular shapes, such as Viking Johnson couplings. The Mastic Blanket immediately bonds to the substrate, gives long lasting protection and is easy to repair after inspection. The Mastic Blanket is also resistant to dilute mineral acids, alkalis and salts.

2.6 Longwrap LD Mastic - A VOC free, cold applied, wax based putty filled with expanded polystyrene beads that is designed to fill gaps and irregular contours prior to the application of other Longwrap Petrolatum products. Longwrap LD Mastic will protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 95°F (35°C). The Longwrap LD Mastic encapsulates the surface in order to protect it. A coat of Longwrap Petrolatum Paste is required prior to application.

2.7 Servishield and Serviwrap Outerwrap - Mechanical protection layers that can be added over the Longwrap tapes. The Servishield is a non-bonded, plastic grid to provide added impact resistance to below grade coatings. The Outerwrap is a bonded tape to provide added mechanical and UV protection for above and below grade coatings.

3.0 SURFACE PREPARATION

3.1 All substances that will impede the bond or otherwise be detrimental to the performance of the coating system must be removed prior to the coating application. This includes all loose surface material, rust, dirt, dust, grease, oil, sharp edges, burrs, mill scale, welding splatter and shop lacquer. These systems can be applied to damp or wet surfaces, but excess moisture should be removed when practical.

3.2 The coating must be applied as soon as practical after cleaning to keep dirt and rust bloom from re-contaminating the pipe surface.

4.0 APPLICATION

4.1 Petrolatum Paste and LD Mastic

4.1.1 Petrolatum Paste is required prior to using all of the Longwrap coatings.

4.1.2 Using a brush or a gloved hand, apply a coat of Petrolatum paste that has a minimum thickness of 100 microns. Be sure that the entire surface is encapsulated. For damp or wet surfaces be sure to work the primer into the surface to displace the moisture.

4.1.3 For irregular areas where the tape wrapping may be difficult, LD Mastic can be used to create a surface that will be easier to wrap. The LD Mastic should be applied by hand and molded to the surface of the substrate.

4.2 Petrolatum Tape and Blanket Coating

4.2.1 Tape must be applied with sufficient tension to conform to the pipe surface.

4.2.1.1 Preferred method: Apply tape in a spiral wrap with sufficient overlap to ensure a good lap seal.

4.2.1.2 Cigarette wrap tape when conditions do not allow for spiral wrapping.

4.2.2 The overlap should be a minimum of 25 mm (1"). When conditions require additional protection, a 55% overlap should be used.

4.2.3 Field applied tape should extend at least 4 inches over the factory coating.

4.2.4 The coating should be free of voids and large wrinkles. The tapes can be cut with scissors to make the application easier for complicated substrates.

4.2.5 The coating wrap should end on the down side of the pipe between the 1 to 5 o'clock positions.

4.2.6 When coating a vertical or riser pipe, always wrap from the bottom to the top.

4.2.7 After a section is wrapped the tape should be worked by hand to smooth out any wrinkles and seal the overlaps.

4.3 Outer wrap

4.3.1 If holiday testing is required, it should be done prior to the application of the outer wrap (see Section 5).

4.3.2 For applications when additional mechanical or UV protection is required, Servishield and Serviwrap Outerwrap can be used to seal the Longwrap coating.

4.3.2.1 Apply the outer wrap spirally using a 55 % overlap.

4.3.2.2 Wrinkling of the outer wrap or airspace between the wax coating and the wrap are acceptable.

5.0 INSPECTION AND TESTING OF FIELD APPLIED COATING

5.1 Visual Inspection: The coating shall appear uniform and free of voids.

5.2 Electrical Continuity Test (Holiday Detector): A coil spring electrode or brush-type electrode should be used. The voltage should be determined using NACE RP0274 (Discontinuity (Holiday) Testing of Protective Coatings). The voltage setting is determine using the below formula.

$$\text{Holiday Detection Voltage Setting (Volts)} = \sqrt{\text{thickness (in dry mils)}} \times 1250$$

5.3 Pipe Inspection: When outer wrap is not used the pipe can easily be inspected any time after installation of the Longwrap coating. Using a utility knife make a slit in the coating and pull back the wax coating to visually inspect the pipe. Once the inspection is complete primer should be applied to the metal surface as described in Section 4. The wax coating can then be pushed back together and worked until the opening is sealed.

6.0 REPAIR OF DAMAGED COATING

6.1 All damaged and loose coating must be removed. If this removal results in the metal surface becoming visible it must be prepared as discussed in Section 3.

6.2 Apply the wax coating as detailed in Section 4. The new coating should overlap the existing coating by a minimum of 1" on all sides.

7.0 BACKFILL

8.1 There is no required cure time for the system prior to backfill.

8.2 Backfill should be free of large rocks, stones, scrap, and debris that could damage the coating.

8.3 Servishield or Serviwrap Outerwrap can be used to protect the coating when it is determined that backfill, handling or installation could be detrimental to the integrity of the coating thickness.

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