Tapecoat®

Application Guideline

1.0 SCOPE

This document contains general instructions and recommended practices for the application of Tapecoat 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 Representative.

2.0 MATERIALS

2.1 Tapecoat Enviroprime – A VOC free, cold applied, wax based primer designed to wet out the surface prior to installation of a wax tape or putty. Enviroprime will help to protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 300°F (149°C). Enviroprime can be used on sweating and wet substrates. Enviroprime is brown in color and may discolor Color Coat.

2.2 Tapecoat Color Coat Primer - A VOC free, cold applied, wax based primer designed to wet out the surface prior to installation of an outer wrap. Color Coat Primer will help to protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 140°F (60°C). Color Coat Primer can be used on sweating and wet substrates. Color Coat Primer is white in color and can be used with both Color Coat and Envirotape.

2.3 Tapecoat Moldable Sealant – A 60 mil VOC free, cold applied, elastomeric adhesive with integrated primer for coating weld seams, bolts, step downs or anywhere a filler material is needed. For use under other coatings only.

2.4 Tapecoat Profile Putty - 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 Tapecoat wax based products. Profile Putty will protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 95°F (35°C). The Profile Putty encapsulates the surface in order to protect it. A coat of Enviroprime or Color Coat Primer is required prior to application. Profile Putty is yellow in color and may discolor Color Coat.

2.5 Tapecoat Flangecoat - A VOC free, cold applied, polymer based caulk that is designed to fill the flange crevice prior to the application of other Tapecoat wax based products.

Flangecoat will protect piping and metal structures from damage and deterioration caused by corrosion at temperatures up to 180°F (82°C). The Flangecoat encapsulates the surface in order to protect it. Flangecoat is gray in color and can be used with both Color Coat and Envirotape.

2.6 Tapecoat Envirotape - A 70 mil 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 250°F (121°C). This coating is appropriate for use below grade in dry, damp or wet operating conditions. The Envirotape 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 Enviroprime or Color Coat Primer which completely wets out the substrate surface and displaces any moisture.

2.7 Tapecoat Color Coat – A 60 mil VOC exempt, UV resistant, cold applied, self-hardening, wax based tape designed to protect piping and metal structures from damage and deterioration caused by corrosion. This coating is appropriate for use above or below grade; in dry, damp or wet operating conditions. The Color Coat 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 Color Coat Primer which completely wets out the substrate surface and displaces any moisture.

2.8 Tapecoat Envirostretch Wrap – A 1 mil clear outerwrap used to seal the wax coating system prior to burial.

2.9 Tapecoat Rugged Wrap - A 30 mil UV resistant mesh weave fiberglass wrap that offers additional mechanical protection for protective coatings. This moisture activated non-shielding overwrap will give coatings and structures increased protection from exposure to abrasion, soil stress, frost heave and mechanical damage above and below grade.

2.10 Tapecoat Terra Shield® - A 3/8" thick closed cell polyethylene foam rock shield with ¼" perforations. Protecting the pipe coating by cushioning the impact of the backfill as it is reintroduced into the ditch and keeping deleterious backfill from direct contact with the pipe coating after the ditch has been closed.

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 Primers and Contour Coatings

4.1.1 Primers are required prior to using all of the wax coatings. Primers are not required under Moldable Sealant.

4.1.2 Using a brush or a gloved hand, apply a coat of primer that has a minimum thickness of 4 mils. 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 Tapecoat Moldable Sealant or Profile Putty can be used to create a surface that will be easier to wrap. The Moldable Sealant can be applied by wrapping around the substrate or small lengths can be cut and molded to the surface of the substrate. The Profile Putty should be applied by hand and molded to the surface of the substrate.

4.1.4 When filling the space between two flange plates first wrap the void with two layers of Tapecoat Flangetape. Make two small slits in the tape at the 3 and 9 o'clock positions. Insert the Flangecoat tube into one of the holes and begin filling the void. As the space is filled make additional slits in the tape and continue filling the void until it is completely filled. Remove the tape apply primer to the exposed substrate prior to wrapping with tape.

4.2 Tape 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 1 inch or 20% of the tape width, whichever is greater. When conditions require additional protection, a 50% 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 Outerwrap

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

4.3.2 For below grade applications when additional mechanical protection is not required, Envirostretch Wrap can be used to seal the wax coating.

4.3.2.1 Apply the Envirostretch Wrap spirally using a 50 % overlap.

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

4.3.3 For below or above grade applications when additional mechanical protection is required, Rugged Wrap can be used to seal the wax coating. Rugged Wrap comes in various Safety Colors and can help with the identification of piping.

4.3.3.1 The user should wear gloves and safety glasses when using the Rugged Wrap.

4.3.3.2 Remove the Rugged Wrap roll from the foil pouch and submerge the roll into a bucket of water. Gently work the roll to insure full penetration of the water into the center of the roll. Remove the roll from the water and gently squeeze it to remove the excess water.

4.3.3.3 Wrap the pipe circumferentially while holding the starting piece to the substrate and then begin to wrap the Rugged Wrap spirally. The roll can be cut with a sharp pair of scissors if needed.

4.3.3.4 The coating wrap should end on the down side of the pipe between the 1 to 5 o'clock positions. If needed, Envirostretch Wrap or another industrial tape can be wrapped at the end of the coating to hold it in place while it hardens.

4.3.3.5 Once a roll is wet, the working time is about 20 minutes before the roll becomes too hard to wrap.

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.

Holiday Detection Voltage Setting (Volts) = √thickness (in dry mils) x 1250

5.3 Pipe Inspection: When Rugged Wrap is not used the pipe can easily be inspected any time after installation of the wax 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 If Rugged Wrap is being used a minimum of 1 hour cure time is required prior to backfill. If Rugged Wrap is not being used then no cure time for the system is required.

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

8.3 Tapecoat Terra Shield 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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