Tapecoat® Royston®

Application Guideline

1.0 SCOPE

This document contains general instructions and recommended practices for the application of Tapecoat and Royston mastic 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 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 Royston R28 - A thixotropic, brush or spray applied asphalt coating for below grade applications. R28 is easy to apply by brush or rubber glove. Due to its thixotropic nature it resists drips and sags during application, but will become more flowable the more it is brushed. Contains Toluene as the solvent.

2.2 Royston R28 Zero VOC - Similar to Royston R28 except that it uses an exempt solvent, the VOC content is reduced to 0 g/L. Contains PCBTF as the solvent.

2.3 Royston A51 Plus - A thixotropic, brush or spray applied coal tar coating for below grade applications. A51 Plus is easy to apply by brush or rubber glove. Due to its thixotropic nature it resists drips and sags during application, but will become more flowable the more it is stirred in the can. Contains Toluene and MEK as the solvent.

2.4 Royston A51 Low VOC – Similar to Royston A51 Plus except that it uses an exempt solvent to lower the VOC content. Contains Toluene, MEK and PCBTF as the solvent.

2.5 Tapecoat TC Mastic - Similar to Royston A51 Plus except that it uses an exempt solvent to lower the VOC content. Contains Toluene, MEK and PCBTF as the solvent.

2.6 Royston Glas-Wrap – Fiberglass mesh used during the application of the mastics to increase the impact and abrasion resistance.

2.7 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 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, moisture, grease, oil, sharp edges, burrs, mill scale, welding splatter and shop lacquer.

3.2 When applying mastics the pipe cleaning must meet either SSPC-SP 2 or SSPC-SP 3 at a minimum, but SSPC-SP 6/NACE No. 3 can also be used.

3.2.1 SSPC-SP 2 HAND TOOL CLEANING: Scrapers, files and wire brushes.

3.2.2 SSPC-SP 3 POWER TOOL CLEANING: Power brushes and grinders

3.2.3 SSPC-SP 6 / NACE No.3 COMMERCIAL BLAST CLEANING
Important to note: Clean the grit or shot off the pipe surface after blasting.

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

3.4 Before coating application the surface must be dry. Preheating the surface can aid in drying the surface, but care must be given to not exceed 120°F. Be cautious not to damage the existing coating during this step by always keeping the torch moving.

4.0 APPLICATION

4.1 Brush or Hand Application

4.1.1 Stir mastic until the product appears uniform using a paint stick or similar tool.

4.1.2 Using a solvent resistant brush or your hand protected by an appropriately rated glove, see Section 2.0 for solvents, apply a coat that has a wet film thickness (WFT) of 10-15 mils.

4.1.3 Allow the first coat to dry to a light touch before application of the second coat. Apply a second coat that has a wet film thickness (WFT) of 10-15 mils.

4.1.4 For increased protection, additional coats can be applied as described in 4.1.2. To prevent mud cracking, never apply more than 30 wet mils in a single coat.

4.1.5 For added impact and abrasion resistance Royston Glas-Wrap can be applied between coats or over the final coat before the final coat dries. When coating a pipe the Glas-Wrap should be applied spirally using light tension. When coating fittings or other structures the Glas-Wrap can be cut to length and laid into the wet mastic. Use a brush or gloved hand to smooth the Glas-Wrap and allow it to wet out.

4.2 Spray Application

4.2.1 Below 60°F it may be necessary to thin the mastics. Typically 1 quart of Toluene can be added to 5 gallons of mastic to obtain the proper viscosity.

4.2.2 Either air or airless type spray equipment available from several manufacturers may be used. The following procedures have provided satisfactory results, but alternatives may be equally successful.

Pump Ratio	Graco 10:1 ratio
Delivery Flow Rate	5 GPM or higher
Air Consumption	4 CFM per gallon
Tip Opening	Graco Mastic Gun with 3/8" tip

4.2.3 Follow all safety instructions listed by the maker of the spray equipment.

5.0 INSPECTION AND TESTING OF FIELD APPLIED COATING

5.1 Visual Inspection: The mastic 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. The material thickness used in this equation is the **dry film** thickness.

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

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

7.0 HANDLING, SHIPPING AND STORAGE

7.1 Care should be taken to handle the coated pipe in such a manner as to prevent exposure to abrasion or damage during handling, shipping, storage or installation.

7.2 Booms, hooks, forklifts, skids and all other devices used to move or handle coated pipe must be padded to prevent damage to the coating. Chains and steel bands should not be used.

7.3 Pipe should be shipped with sufficient padding or dunnage to adequately protect the pipe coating.

8.0 BACKFILL

8.1 The mastics must be cured before they can be backfilled. At 70°F and 50% RH the minimum cure time will be 1 ½ hours after the last coat of mastic. Cure times will vary significantly depending on the site conditions and coating.

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.

Chase Corporation
295 University Avenue
Westwood, MA 02090

Phone: 800-323-4182
Fax: 781-332-0701
www.chasecorp.com

An ISO 9001:2008
REGISTERED COMPANY