

POLYKEN®

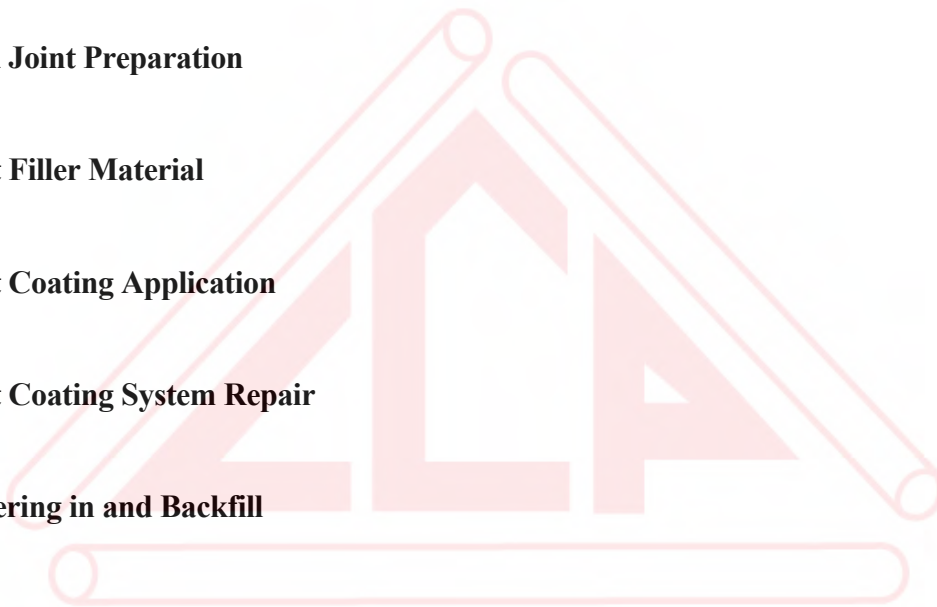


**Cold Applied Primerless Tape Coating Systems
For Field Joint Application Specifications
Issued 12/2006**

COLD APPLIED TAPE COATING SYSTEM FIELD JOINT APPLICATION SPECIFICATION

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COLD APPLIED PRIMERLESS TAPE COATING SYSTEM FIELD JOINT APPLICATION SPECIFICATION

1.0 GENERAL

- 1.1 This specification will cover the proper application and installation of the Polyken[®] (Covalence Adhesives) joint wrap coating system for the exterior protection of welded field joints.
- 1.2 The joint coating system shall be applied in accordance with Covalence Adhesives specifications and the end-user specifications. The joint coating system shall be installed in accordance with size specifications per Covalence Adhesives recommendations.
- 1.3 The pipeline contractor responsible for the application of the joint coating system shall furnish all equipment and properly trained and supervised labor and service required for the specified application of the joint coating system. All equipment and tools required for the application of the joint coating system shall be subject to the approval of the End-user Company. The pipeline contractor shall follow the Covalence Adhesives application specifications and work in harmony with representatives of Covalence Adhesives and the end-user to alleviate any difficulties during the application and installation.
- 1.4 The contractor shall be responsible for verifying the integrity of the coated field joint. Damaged coating shall be repaired at the contractor's expense. The pipeline contractor shall supply all repair material.
- 1.5 At the option of the end-user company or the pipeline construction contractor, Covalence Adhesives will supply a service person to assist or instruct the contractor and/or the end-user coating inspector with the proper application of the joint coating system.
- 1.6 The Covalence Adhesives (Polyken[®]) service representative shall have the authority, through the end-user representative, to suspend the application of the joint coating system until such time that the application satisfies Covalence Adhesives (Polyken[®]) application and quality control standards for the joint coating system.
- 1.7 Inspection of coated weld joints shall be performed by coating inspectors qualified either by experience or certified training. The joint coating system shall be applied by properly trained personnel in the application of the joint coating system and meet the approval of Covalence Adhesives (Polyken[®]).
- 1.8 High-tack adhesive joint wrap tapes are supplied with a coated release liner on the adhesive. This interliner is required to prevent the highly aggressive adhesive from prematurely bonding to the tape backing.

2.0 MATERIAL STORAGE

- 2.1 All coating material shall be stored, handled, and transported in such a manner as to prevent damage to individual carton containers. Cartons, tape rolls, or individual repair rolls removed from the storage pallets shall not be dropped, rolled, or thrown in any manner as to damage the coating material. Cartons or tape rolls shall not be handled with hooks, ropes, cables, or any other mechanical devices as to damage the coating materials.
- 2.2 Factory rolls and/or cartons shall be stacked on end at all times and no higher than 72 inches (182.88 cm).
- 2.3 The coating material shall be stored and/or transported in a dry, ventilated location. Storage temperature shall be a minimum of 60°F / 15.5°C and not exceed 120°F / 49°C.

- 2.4 Individual cartons or rolls of coating material shall not contact bare ground or bare warehouse floor. Tools or equipment shall not be stacked on top of the rolls.
- 2.5 Joint coating materials that have been damaged or show signs of deterioration shall be inspected by representatives of Covalence Adhesives and at the discretion of the end-user, be rejected.
- 2.6 Joint-coating system waste material, stub rolls, empty cartons, release liners, separator papers, and related waste materials SHALL NOT be discarded along the pipeline right-of-way or in the pipeline ditch.
- 2.7 Roll separator paper, as supplied by Covalence Adhesives, shall always be used with the joint wrap tape coatings. The separator paper prohibits adhesive edge bleed of the tape rolls from sticking to unintended surfaces.

3.0 **FIELD JOINT PREPARATION**

- 3.1 The field joint pipe surface shall be free of mud, oil, grease, or any other foreign material that will prevent the joint coating system from bonding to the steel pipe surface. Visible oil and grease shall be removed with suitable solvent. The steel surface shall be dry prior to the application of the joint wrap tapes. KEROSENE shall NOT be used for cleaning the pipe joints.
- 3.2 All bare pipe surfaces shall be either power wire brush or abrasive cleaned. The power wire brush cleaned surface shall be cleaned to a Swedish Standards Association (SSA), ISO-8501-ST2 or Steel Structure Painting Council (SSPC) SSPC-SP3-82 surface finish. The abrasive cleaned surface shall be a minimum commercial blast surface finish as specified in Swedish Standards Association (SSA), ISO 8501-SA 2.5 or Steel Structure Painting Council (SSPC) SSPC-SP6-82 surface finish. All burrs and weld slag shall be removed from the pipe surface.
- 3.3 The pipe surface shall be dry and free of any dust particulate prior to the application of the joint coating system. There shall be no flash rust on the pipe surface prior to the application of the coating system.
- 3.4 Mill applied primary coating system should be beveled at the cutback area with a power wire brush. Abraded coating shall be removed from the cut back area.
- 3.5 The pipe joint surface shall not be covered with dew, frost, or rain moisture prior to the application of the joint coating system. If required by the end-user, prior to the application of the tape coating system, the pipe steel shall be heated to 120°F / 48.8° C, to remove any moisture trapped within the steel surface.

4.0 **WELD FILLER MATERIAL**

- 4.1 If required by the end-user, prior to the application of the joint coating system, the raised girth weld shall be coating with Polyken® #933-25 mastic filler. Filler strips 4 inches (10.16 cm) wide shall be centered, smoothed, and coat the entire surface of the raised girth weld.
- 4.2 In the areas on step downs on lap welds if required, the step down area will be filled with Polyken #939 or #931 mastic filler materials.

5.0 **JOINT COATING APPLICATION**

- 5.1 The cold applied joint wrap tape coating systems shall be applied under hand tension or using a hand-wrapping machine capable of maintaining even, constant tension across the width of the tape.

- 5.2 The joint wrap tape coating system shall be applied to the primed field joint in either spiral or cigarette configuration, as determined by the end-user specifications. The wrapping process shall start at a minimum of 4 inches (10.16 cm) beyond the cutback edge of the plant applied coating and start on the downside of the pipe. The release liner should be removed just prior to the application of the tape to the primed pipe surface. This will prevent contamination of the high tack adhesive.
- 5.3 The joint coating system shall be applied under taught hand or machine tension that will result in a smooth, wrinkle free coating. Sufficient tension shall be applied to cause a 1 - 2% neckdown width. The minimum spiral overlap width shall be $\frac{3}{4}$ " / 1.9 cm. Particular attentions should be afforded while coating over the girth weld area, to prevent wrinkles in the coating.
- 5.4 A minimum of two (2) layers of joint wrap tape coating shall be applied over the field joint. If a single layer is required, then a mechanical protection outerwrap layer shall be applied over the single layer of joint wrap.
- 5.5 The joint coating system materials shall be stored in a facility in accordance with section 2.0 at a minimum ambient temperature of 70°F / 21°C and not to exceed 100°F / 37°C. The rolls shall be removed and transported from the storage facility on a daily consumption basis and conveyed to the right-of-way (ROW) in a heated and covered box, vehicle, or sled. The heated box, vehicle, or sled shall be maintained at a minimum of 70°F / 21°C and not to exceed 100°F / 37°C to insure proper roll body temperature prior to application. The joint coating system shall be stored in the heated vehicle or sled a minimum of 12 hours prior to application and shall be removed directly from the heated vehicle or sled immediately prior to application. The joint coating system SHALL NOT be applied if the coating roll body temperature is below 60°F / 15.5°C.

6.0 JOINT COATING SYSTEM REPAIR

- 6.1 The coated field joint shall be electrically inspected for holidays according to National Association of Corrosion Engineers (NACE) Standard RP-02-74. The travel rate of the holiday detector shall not exceed one (1) foot / 30.48 cm per second, nor shall an activated holiday detector remain stationary over the coated field joint.
- 6.2 Coated field joints that are damaged prior to lowering in and backfilling shall be repaired with coatings approved by the end-user.
- 6.3 The damage area shall be cleaned and the abraded portions trimmed level. The repair coating shall be applied in accordance with the coating manufacturer specifications or recommendations.

7.0 LOWERING IN AND BACKFILL

- 7.1 Select backfill material shall contain NO large or sharp stones that could damage the joint wrap coating system during backfilling.