



**POLYFLEX BRIDGE SYSTEM**  
**FIELD QUALITY CONTROL**

**1. MATERIAL STORAGE, HANDLING AND SAFETY**

- 1.1 Polyflex Bridge System is delivered in clearly marked containers with manufacturer's identification, lot numbers and shelf life expiration dates. The materials are to be conditioned at 70°-90°F prior to application. Containers should not be stored directly on the concrete or steel substrate.
- 1.2 Refer to Technical Data Pages and Material Data Sheets at all times before and during application.

**2. SURFACE PREPARATION**

**2.1 Concrete:**

- 2.1.1 Remove all existing coatings and linings by shot blasting, abrasive blasting or other method approved to achieve a mechanical profile per manufacturer's recommendation.
- 2.1.2 Always verify moisture content to be less than 6-8% at or below substrate surface.
- 2.1.3 A 28 day cure is usually required for all freshly placed concrete.
- 2.1.4 After the concrete has been prepared, a test shall be performed to measure the substrate cohesion/primer adhesion according to ASTM D 4541. The pull test will be pass if adhesion strengths reach 150 psi.

**2.2 Steel:**

- 2.2.1 Remove all existing coatings or linings by shotblasting, abrasive blasting or other method approved to achieve a "Near White Metal" blast to SSPC-SP-10 with a 2-3 mil anchor profile.
- 2.2.2 After substrate has been prepared, a test shall be performed to measure the primer adhesion strength according to ASTM D4541. The pull test will be pass if adhesion strengths reach 300 psi.

**3. PRIMER APPLICATION**

- 3.1 **Storage and Handling:** Store materials in original containers at ambient temperatures of 70°-90°F. Avoid freezing temperatures.
- 3.2 **Weather Limitations:** Primer should not be applied below 45°F or if rain is expected within 2 hours following the application. Humidity levels must be monitored with levels not to exceed 85% RH. Application may proceed given the substrate temperature is 5°F above dew point.
- 3.3 **Protection of Workers, Traffic and Adjacent Areas:** Surfaces should be kept free of any traffic once surface preparation has begun and no trades shall be permitted in areas during the application and curing of the system. If necessary, mask or cover adjacent areas by suitable means.

- 3.4 **Application Rate:** Apply a thin coat of properly mixed material at a rate of 150-200 sq.ft. per gallon by brush, roll or spray. Coverage will vary depending upon porosity of the substrate and surface texture.
- 3.5 **Cure Time:** (@75°F ± 2°F) Wait approximately 2 hours or until primer becomes tacky before applying Membrane. If the primed areas become wet from rain or condensation and are not top coated within 24 hours, the primer will need to be abrasively prepared prior to repriming.
- 3.6 **Reactivity and Non-Cementitious Patches:** Consult with a **Wasser** Representative regarding patching products and installation.
- 3.7 **Quality Control Testing:** The following tests will be performed to ensure the primer's integrity.
  - 3.7.1 Moisture Test on concrete surfaces
  - 3.7.2 Temperature and Humidity readings
  - 3.7.3 Adhesion Pull Test
- 3.8 **Deficiency Repairs:** Any repair of the primed surface will be carried out following the recommendations of the on-site representative to the satisfaction of the State Engineering.

#### 4. MEMBRANE APPLICATION

- 4.1 **Storage and Handling:** Store materials in original containers at ambient temperatures of 70°-90°F. Avoid freezing temperatures.
- 4.2 **Weather Limitations:** Refer to Wasser Technical Data Page for drying time schedule. Humidity levels must be monitored with levels not to exceed 85% RH. Application may proceed given the substrate temperature is 5°F above dew point.
- 4.3 **Protection of Workers, Traffic and Adjacent Areas:** Surfaces should be kept free of any traffic once surface preparation has begun and no trades shall be permitted in areas during the application and curing of the system. If necessary, mask or cover adjacent areas by suitable means. All work to be performed by Licensed Applicators.
- 4.4 **Application Rate:** Membrane to be applied at 100 mils nominal thickness. If additional shear resistance between the membrane and wearing surface is required, a shear membrane should be applied at 30-40 mils. An aggregate will be broadcast into the wet film and fully integrated into the system. The suggested spread rate for the aggregate is 0.5lbs/sq.ft.
- 4.5 **Cure Time:** (@ 75°F±2°F) Membrane will achieve sufficient cure in approximately 1 hour for construction traffic, if necessary.
- 4.6 **Bond Strength:** Bond strength of the membrane and it's adhesion to the prepared and primed substrate shall be a minimum of 150 psi (1 MPa).
- 4.7 **Quality Control:**
  - 4.7.1 Membrane Thickness: Magnetic or Ultrasonic mil gauges will be used to calculate overall membrane system thickness.
  - 4.7.2 Membrane Adhesion: Pull testing will be performed at the rate specified by State DOT Engineers using ASTM D 4541.
  - 4.7.3 Spark Testing: Testing for pin holes or holidays in the finished membrane will be performed according to manufacturer's recommendations.
  - 4.7.4 Deficiency Repairs: Areas determined to be deficient need to be addressed within four hours of membrane application or additional surface preparation will be required. If repairs are completed outside this recoat window, apply WP 50- Surface Activator to prepare existing membrane for additional coats.

## 5. TACK COAT APPLICATION

- 5.1 **Storage and Handling:** Store materials in original containers in cool, dry conditions and out of direct sunlight.
- 5.2 **Weather Limitations:** Assure all surface are dry before application and the weather forecast does not indicate rain before tack coat is dry to touch.
- 5.3 **Protection of Workers, Traffic and Adjacent Areas:** Prior to use, the user must have a basic understanding of heating methods. Surfaces should be kept free of any traffic once surface preparation has begun and no trades shall be permitted in areas during the application and drying of the tack coat. If necessary, mask or cover adjacent areas by suitable means.
- 5.4 **Application Rate:** The membrane is simply melted in the appropriate indirectly heated melter, poured onto the prepared substrate and leveled to a thickness of 1/8" thick. Refer to Polyflex 511 TackCoat technical data page for the recommended application temperature.