

915.01

Section 915. BRIDGE COATING SYSTEMS

915.01. General Requirements. Select a complete coating system from the Qualified Products List for each structure. Use the same coating system for all coating repairs to the structure including warranty work. The system must consist of a tinted organic zinc-rich primer, a white intermediate coat, and a urethane top coat matching the Federal Standards No. 595B color number, as shown on the plans. For faying surfaces of slip critical bolted connections, use a zinc-rich primer meeting the requirements for Class B slip coefficient, selected from the Qualified Products List.

Before coating, provide the Engineer with the product data sheets showing mixing and thinning directions, and the manufacturer-recommended spray nozzles and pressures for each product. Provide the Engineer with documentation stating the date of manufacture for the coating product components.

Use spray equipment to apply the coating. The coating products and the thinners must arrive at the project in new, unopened containers. Coating containers must be labeled with the manufacturer's name, product name, batch number, and date of manufacture.

915.02. Mixing the Coating. Using a high shear mixer, mix the coating in accordance with the manufacturer's recommendations, to a homogenous consistency. Do not use paddle mixers or paint shakers. Mix until the metallic powder or pigment is in suspension. Disperse coating solids that may settle to the bottom of the container. Strain the primer through a screen with openings no greater than a No. 30 sieve meeting the requirements of ASTM E 11. After straining, continuously agitate the primer until application is complete.

915.03. Thinning the Coating. Do not thin the coating, unless otherwise recommended by the coating manufacturer. For thinning the coating, provide thinners recommended by the coating manufacturer. Do not exceed the manufacturer's recommended thinning limits.

915.04. Conditions for Coating. Apply coatings under the conditions specified by this subsection.

A. **Temperature.** Do not apply coatings if air or steel temperature is greater than 100 °F, or if the steel temperature is less than 5 °F higher than the dew point. Apply the primer and intermediate coats if air, coating material, and steel temperatures exceed 50 °F. Apply the top coat if air, coating material, and steel temperatures exceed 40 °F. Unless the manufacturer recommends a longer recoat time, maintain the

specified minimum air and steel temperatures between coats for 24 hours in the field, or for 16 hours in the fabrication shop.

B. **Humidity.** Do not apply coating if the relative humidity exceeds 90 percent, or if temperature and humidity conditions cause moisture to condense on the surfaces requiring coating. Use a psychrometer to measure the humidity.

C. **Heating.** If heating is required, heaters must maintain air and steel temperatures from 50 °F to 100 °F without discharging oils or other pollutants into the enclosure.

D. **Storage and Shelf Life of Coating.** Store the coating materials in accordance with the manufacturer's directions. Use coating within one year of the date of manufacture, unless product data sheets indicate a shorter shelf life.