

3520 ZINC-RICH PAINT SYSTEMS

3520.1 SCOPE

Provide zinc-rich paint systems.

3520.2 REQUIREMENTS3501

A Zinc-Rich Primer

Provide multi-component zinc-rich primer capable of being spray-applied in accordance with the manufacturer’s instructions and applications guide. After mixing according to the manufacturer’s recommendation, strain the primer through a 30-60 mesh screen or a double layer of cheesecloth to remove un-dispersed zinc agglomerates. Formulate the primer to produce a distinct contrast with blast cleaned steel and with the subsequent intermediate coat.

A.2. Pigment

Provide a metallic zinc pigment meeting the requirements of ASTM D 520. Only add inert materials to the pigment for tinting. Ensure the inert materials do not reduce the effectiveness of the galvanic protection.

A.3. Finished Primer

Provide finished primer meeting the requirements in Table 3520-1:

Table 3520-1 Finished Primer Requirements	
Characteristic	Requirement
Zinc portion, total solids by weight	≥ 75.0 %
Pot life at 77° F [25° C]	≥ 4 h
Density of VOC	≤ 3.5 lb/gal [420 g/L]
Slip coefficient of cured primer	≥0.33
Cure time for recoating*	per Manufacturer’s Product Data Sheet
* When applied at 3 mil [74 µm] dry-film thickness at 77° F [25° C] and 50 percent R.H.	

B Approved Epoxy Zinc-Rich Systems

Provide a zinc-rich paint system listed on the Approved Products List for “Bridge Structural Steel Coatings.”

B.1 Epoxy Zinc-Rich System

Provide an epoxy zinc-rich system consisting of an epoxy zinc-rich primer, an epoxy intermediate coat, and an aliphatic urethane finish coat.

B.2 Inorganic Zinc-Rich System

Provide an inorganic zinc-rich system consisting of solvent-based inorganic zinc-rich primer, an epoxy intermediate coat, and an aliphatic urethane finish coat.

B.3 Moisture-Cure Zinc-Rich System

Provide a moisture-cure zinc-rich system consisting of moisture-cure zinc-rich primer, a urethane intermediate coat, and an aliphatic urethane finish coat.

B.4 Two Coat Zinc-Rich System

Provide a moisture cure zinc-rich system consisting of moisture-cure zinc-rich primer and a fast-dry polyaspartic urethane finish coat.

C Color

Provide a semi-gloss finish coat as required by the contract.

D Packaging and Labeling

Provide multi-component paints packaged in separate containers or kits that ensure paint manufacturer's mixing proportions are achieved when using the entire container.

3520.3 SAMPLING AND TESTING

Provide to the Engineer a manufacturer's Certificate of Compliance with each batch, lot, or both for each component of the zinc-rich paint system.

Provide a color Draw Down sample on a Leneta chart per ASTM D 2805 to the Materials Laboratory for verification of the finish coat color.