3520 ZINC-RICH PAINT SYSTEMS

3520.1 SCOPE
Provide zinc-rich paint systems.

3520.2 REQUIREMENTS

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>
<thead>
<tr>
<th>Characteristic</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc portion, total solids by weight</td>
<td>$\geq 75.0%$</td>
</tr>
<tr>
<td>Pot life at 77°F [25°C]</td>
<td>$\geq 4$ h</td>
</tr>
<tr>
<td>Density of VOC</td>
<td>$\leq 3.5$ lb/gal [420 g/L]</td>
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<tr>
<td>Slip coefficient of cured primer</td>
<td>$\geq 0.33$</td>
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<tr>
<td>Cure time for recoating*</td>
<td>per Manufacturer’s Product Data Sheet</td>
</tr>
</tbody>
</table>

* 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.