

Organic Zinc:	75 - 125 μm (3.0 - 5.0 Mils)
Epoxy:	125 - 175 μm (5.0 - 7.0 Mils)
Urethane:	50 - 100 μm (2.0 - 4.0 Mils)

The coating system shall pass each of the following tests:

(A) Fresh water resistance (ASTM D 870). The panels shall be scribed as per ASTM D 1654 to the depth of the base metal in the form of an "X" having at least 50 mm (2-inch) legs and then immersed in fresh tap water at $25 \pm 3^{\circ}\text{C}$ ($75 \pm 5^{\circ}\text{F}$). After 30 days of immersion, the panels shall show no rusting nor shall the coating show any blistering, softening or discoloration. Blistering shall be rated by ASTM D 714.

(B) Salt water resistance (ASTM D 870). The panel shall be scribed as specified in "A" above and then immersed in a water solution of 5 percent sodium chloride at $25 \pm 3^{\circ}\text{C}$ ($75 \pm 5^{\circ}\text{F}$). The panels shall show no rust nor shall the coating exhibit any blistering or softening after 7, 14, and 30 days. Blistering shall be rated by ASTM D 714. The sodium chloride solution shall be replaced with a fresh solution after examination at 7 and 14 days.

(C) Weathering resistance. The panels shall be tested in accordance with ASTM D 4587 Method D, utilizing UV A 340 bulbs. The panels shall be placed on test at the beginning of a wet cycle. After 3000 hours continuous exposure, the coating shall show no blistering or loss of adhesion, nor shall the panels show any rusting. The 60 degree specular gloss measurements shall be performed on the sprayed panels utilized for this test. The three initial measurements (one per panel) will be average together. The three final measurements also will be averaged together.

(D) Salt fog resistance. The panels shall be scribed as specified in "A" above, and then tested in accordance with ASTM B 117. After 3000 hours of continuous exposure the coating shall show no loss of bond nor shall it show rusting or blistering beyond 2 mm (1/16 inch) from the center of the scribe mark. Blistering shall be rated by ASTM D 714.

(E) Elcometer adhesion test, ASTM D 4541. The panels shall be tested in accordance with the following: lightly sand the coating surface and aluminum dolly and applied a quick set adhesive. Allow adhesive to cure overnight. Scribe the coating and adhesive around the dolly prior to testing. Make a minimum of four trials to failure and report the four trials. No trial shall be less than 400 psi. Fracture at the primer-blast interface shall be caused for rejection.

910.04 Prequalification. Prior to approval, copies of the manufacturer's certified test data showing that the coating system complies with the performance requirements of this specification shall be submitted to the Engineer of Tests, 1600 W. Broad St., Columbus, Ohio 44223. The certified test data shall also state the following physical properties for each coating:

- 1) Density, g/mL (lbs. per gal.)
- 2) Solids, % by weight
- 3) Solids, % by volume
- 4) Viscosity
- 5) Drying time
- 6) V.O.C. content, g/mL (lb. per gallon)

The test data shall be developed by an independent testing laboratory approved by the Director and shall include the brand name of the paint, name of manufacturer, number of lots tested, and date of manufacture.

The following items shall also be submitted to the Director prior to approval:

- 1) Manufacturer's technical data sheet for each coating.
- 2) Material Safety Data Sheet for each coating.
- 3) Enough components to produce a 4 liter (one gallon) sample of each coating.
- 4) A one liter (one quart) sample of the thinner to be used with each coating.

When the coating has been approved by the Director, further performance testing by the manufacturer will not be required unless the formulation or manufacturing process has been changed, in which case new certified test results will be required.

910.05 Sampling. Acceptance variances shall be established by the Laboratory.