

PVDF Paint System

► GENERAL INFORMATION

The manner of application to be a two coat roll coated system including a premium PVDF top coat over a properly cleaned and pre-treated substrate. Contains 70% Kynar 500[®] or Hylar 5000[®] resins. Meets both Kynar 500[®] and Hylar 5000[®] specifications. PVDF on coated steel conforms to ASTM A 755 and ASTM A 924. The surface is to be streak free and smooth with no blistering or other imperfections. All standard Metal Sales colors do not contain Lead, Mercury or Cadmium. PVDF is a fluoropolymer coating conforming to AAMA 2605-17A requirements. Backer coat is a polyester paint system with no warranty.

► SUBSTRATE

Substrate to be Hot Dipped Galvanized Structured Steel (SS) per ASTM A 653 or Galvalume[®] per ASTM A 792 or aluminum per ASTM B 209.

► FILM THICKNESS ■ ASTM D 1005

Topcoat finish consist of a primer with a dry film thickness of 0.20–0.30 mil. Primary topcoat shall have a dry film thickness of 0.70–0.80 mil. The reverse side of the panel shall have a primer coat with a dry film thickness of 0.20–0.30 mil and a pigmented backer coat with a dry film thickness of 0.30–0.40 mil. Total dry topside film thickness for the system shall be 0.90-1.10 mils. All measurements per ASTM D 1005.

► ABRASION RESISTANCE ■ ASTM D 968

Per ASTM D 968, Method A, PVDF will pass 65±5 liters/mil, minimum of falling sand.

► BEND ADHESION ■ ASTM D 4145

Per ASTM D 4145, no loss of adhesion when taped with cellophane tape when subjected to a 0T-2T diameter 180° bend test on 0.017" G90 (grade 50) galvanized steel or fabricator's roll forming operation. (Not to include zinc failures).

► CHALK RESISTANCE ■ ASTM D 4214

No chalking greater than #8 rating per ASTM D 4214 after 2000 hours in a QUV-A accelerated weathering tester.

► CHEMICAL RESISTANCE ■ ASTM D 1308

No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, per ASTM D 1308.

► COLOR CHANGE ■ ASTM D 2244

Finish color coat change not to exceed 5 Hunter Units per ASTM D 2244 test procedure, after 2000 hours in a QUV-A accelerated weathering tester.

► CROSS-HATCH ADHESION ■ ASTM D 3359

No paint removal with cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1/8" apart per ASTM D 3359.

PVDF Paint System

► CURE TEST ■ **ASTM D 5402**

PVDF will withstand 100 double rubs of an MEK-soaked cloth before exposing primer coat per ASTM D 5402.

► DIRECT AND REVERSE IMPACT ADHESION ■ **ASTM D 2794**

No visible paint removal with cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester (Not to include Zinc coating failures), per ASTM D 2794.

► FLAME SPREAD RATE ■ **ASTM E 84**

PVDF displays a Flame Spread Index of 0 to 25 (Class A), when tested in accordance with ASTM E 84.

► GRAFFITI RESISTANCE ■ **ASTM D 6578**

PVDF meets and exceeds requirements of ASTM D 6578.

► HARDNESS ■ **ASTM D 3363**

Minimum pencil hardness is HB to 2H, using Eagle Turquoise pencils per ASTM D 3363.

► HUMIDITY RESISTANCE ■ **ASTM D 2247**

No blistering, cracking, peeling, loss of gloss or softening of the finish after 2000 hours of exposure to 100% humidity at 100°F ±5°F, per Federal Test Method Standard 141, Method 6201 or ASTM D 2247.

► SALT SPRAY RESISTANCE ■ **ASTM B 117**

Samples diagonally scored and subjected to 5% neutral salt spray per ASTM B 117 lasting 1000 hours for Galvanized-coated steel, 1000 hours for Galvalume®-coated steel and 3000 hours for aluminum, then taped with cellophane tape. There shall be no blistering and no loss of adhesion greater than 1/16" from score line. Samples are taped 1 hour after removal from test cabinet.

► SHEEN ■ **ASTM D 523**

Sheen is determined per ASTM D 523 at a glossmeter angle of 85°. PVDF has a Low Sheen value of 10 or less.

► SMOKE DEVELOPED INDEX ■ **ASTM E 84**

PVDF displays a Smoke Developed Index of 0 (Class A), when tested in accordance with ASTM E 84.

► SPECULAR GLOSS ■ **ASTM D 523**

Specular gloss is to be determined per ASTM D 523 at a glossmeter angle of 60°. PVDF has a Standard Gloss range of approximately 20 to 35. Low Gloss is in the range of 10 to 15.

► QUV-A ACCELERATED WEATHERING TEST ■ **ASTM D 4587**

No chalking, blistering or adhesion loss of coating system after 2000 hours of accelerated weathering, per ASTM D 4587 and ASTM G 154.