

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® and Hylar 5000® resins. Meets both Kynar 500® and Hylar 5000® specifications. PVDF on coated steel conforms to ASTM A 755. The surface is to be streak free and smooth with no blistering or other imperfections. All standard Metal Sales colors do not contain Lead or Cadmium.

► SUBSTRATE

Substrate to be Hot Dipped Galvanized 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” G-90 (grade D) 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, Method A after a 2000 hour weatherometer test.

► 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 hour weatherometer test.

► 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.

► CURE TEST • ASTM D 5402

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

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▶ **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 classification of A (Class 1), when tested in accordance with ASTM E 84.

▶ **HARDNESS • ASTM D 3363**

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

▶ **HEAVY METALS**

PVDF painted products listed with ENERGY STAR® do not contain lead or cadmium.

▶ **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 for 1000 hours, then taped with cellophane tape. There shall be no blistering and no loss of adhesion greater than 1/8" from score line. Samples are taped 1 hour after removal from test cabinet.

▶ **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 gloss units. Low gloss is in the range of 10 to 15 gloss units.

▶ **WEATHEROMETER TEST • ASTM D 822**

No checking, blistering or adhesion loss of coating system after 2000 hours of accelerated weathering, per ASTM D 822 and ASTM G 23.