

COOL PVFD

All Taylor Metal Products PVDF coating utilize pigments that are specifically designed to reflect infrared light, help reduce the heat gain of a dwelling, and conform with ENERGY STAR® criteria for steep slope cool roofing products.
PVDF is a fluoropolymer that is manufactured under the trademarked name PVDF Paint finishes containing a minimum 70% PVDF resin meets the high-performance weathering criteria established by the American Architectural Manufacturing Associations (AAMA 2605, 621), and are allowed to carry the KYNAR 500® name.

TYPE OF PROPERTY	RESULTS
Base Metal	G90 – Hot dipped galvanized steel sheet, meeting ASTM A653/A924 (Pre-Painted G-90 is generally available in the Pacific Northwest as a standard) AZ-50 - Aluminum/Zinc (Galvanized) coating, meeting ASTM A792 (Pre-Painted AZ-50 is generally available in California and the Southwest as a standard) Standard gauges 26GA-24GA-22GA-20GA 3105-H14 0.032 Aluminum ASTM B-209- Aluminum Substrate Standard thickness 0.32-0.40-0.50 6 oz. and 20 oz. Copper ASTM B370 – Copper Sheet and Strip for Building Construction Nominal thickness: 16 oz. — 0.0216 in.; 20 oz. — 0.0270 in.
Dry Film Thickness (nominal)	0.25 mil primer with 0.75 - 0.90 mil topcoat Aluminum yield strength: 152 MPa Aluminum tensile strength: 172 MPa Copper yield strength: 138 MPa Copper tensile strength: 220–275 MPa
Minimum Yield	29ga and 26ga Steel 80 KSI Minimum yield 24ga and 22ga Steel 50 KSI Minimum yield
Co-efficient of Thermal Expansion	Steel 06.7 x 10 ⁻⁶ in/in/F° (13.9 m/m.K x 10 ⁻⁶) Aluminum 12.1 x 10 ⁻⁶ 68-212°F Copper: 9.8 x 10 ⁻⁶ in./in./°F at 68–212°F
Modules of Elasticity	29.0 x 106 x KSI (200 GPa)

TEST DESCRIPTION	TESTING STANDARDS	MATERIAL PERFORMANCE
Abrasion Resistance	ASTM D968, Method A	Coefficient of sand abrasion 65+10 Liters
Accelerated Weathering	ASTM D4587 Condition B or ASTM G23 Method 1 or 2, type EH apparatus Hours: 5000 ASTM D4587 Condition B or ASTM G53, Method 1 or 2, type EH apparatus or ASTM G154 Hours: 5000 ASTM D4587 Condition B or ASTM G23 Method 1 or 2, type Apparatus or ASTM G151 Hours: 2000 ASTM D3361 Hours: 1000	Chalk: Rating of 8 or better per ASTM D 4214 Color: ≤2ΔE color change per ASTM D 2244 Chalk: Rating of 8 or better per ASTM D 4214 Color: ≤2ΔE color change per ASTM D 2244 Chalk: Rating of 8 or better per ASTM D 4214 Color: ≤2ΔE color change per ASTM D 2244 Acceptable – No cracking, peeling, blistering, loss of adhesion of the protective coating, or corrosion of the base metal. Chalk: Rating of 8 or better per ASTM D 4214, Method A (ASTM D 659) Color: <5ΔE Hunter Units per ASTM D 2244
Acid Pollutants 20% Sulfuric Acid, 18hrs 10% Muriatic Acid, 24hrs	D1308	No color change No color change No blistering
Alkali Resistance	ASTM D1308: 10%, 25% NaOH, 1 hr	No effect
Cross Hatch Adhesion	ASTM D3359, Method B	No loss of adhesion
Exterior Exposure	ASTM D2244 ASTM D4514 10 yrs @45°, south Florida	Max 5 fade Max 8 chalk
Acid Rain Test	Kesternich SO ₂ , DIN 50018	15 cycles min No objectionable color change
Cyclic Salt Fog	ASTM D5894 Hours: 3000	Scribe: Rating of 8, 1/32" creepage from scribe per ASTM D 1654, procedure A Field: Rating of 10, no blistering per ASTM D 1654, Procedure B
Flexibility T-Bend	D4145	0-2 T-bend; No pick-off
Formability	ASTM D522	No cracking, no loss of adhesion to the point of metal Rupture
Flame Test	E84	Class A Coating
Specular Glass	ASTM D523	25-35 at 60 degrees
Pencil Hardness	ASTM D3363	F-2H
Humidity Resistance	ASTM D2247 ASTM D1735 100% relative humidity @95° F	Hours: 4000 No #8 blisters
Impact Reverse Resistance	ASTM D2794	Reverse & Direct Impact: No cracking & no loss of adhesion
Salt Spray Resistance	ASTM B117 : 5% salt fog @95°	Passes 4000 hrs. Less than 1/16" avg. Creepage from scribe; None of few #8 blisters
UV Exposure	ASTM G154 Hours: 2016	Hours: 2016, Chalk: Rating of 8 or better per ASTM D 4214, Method A (ASTM D 659) Color: <5ΔE Hunter Units per ASTM D 2244
Wet Adhesion	Water Immersion Hours: 1500	No loss of adhesion