

Cool Coatings - PVDF

cool-scape™ coatings feature vivid, fade-resistant color, incredible durability and environmentally friendly cool technology originally developed for stealth aircraft in the U.S. military.

Roof Panels: Loc-Seam & Seam-Loc (24 Gauge Standard)

Dark Bronze† IR .29 SRI 29	Hemlock Green† IR .34 SRI 36	Evergreen† IR .30 SRI 31	Pearl Gray† IR .50 SRI 57
Royal Blue† IR .29 SRI 29	Slate Gray† IR .37 SRI 40	Terra Cotta† IR .35 SRI 36	Light Bronze† IR .44 SRI 49
Medium Bronze† IR .30 SRI 31	Colonial Red† IR .32 SRI 32	Regal White† IR .72 SRI 87	Reflective White† IR .64 SRI 76
Warm White† IR .59 SRI 70	Light Stone† IR .58 SRI 68	Surrey Beige† IR .51 SRI 58	Taupe Sand† IR .57 SRI 67

Roof Panels: Standing Seam 360 & Standing Seam II (24 Gauge Standard)

Regal White† IR .72 SRI 87	Warm White† IR .59 SRI 70	Dark Bronze† IR .29 SRI 29	Evergreen† IR .30 SRI 31
Royal Blue† IR .29 SRI 29			

Roof Panels: Long Span III (26 Gauge Standard)

Dark Bronze† IR .29 SRI 29	Evergreen† IR .30 SRI 31	Pearl Gray† IR .50 SRI 57	Royal Blue† IR .29 SRI 29
Slate Gray† IR .37 SRI 40	Terra Cotta† IR .35 SRI 36	Surrey Beige† IR .51 SRI 58	Taupe Sand† IR .57 SRI 67
Light Stone† IR .58 SRI 68	Regal White† IR .72 SRI 87	Reflective White† IR .64 SRI 76	Warm White† IR .59 SRI 70

Reflectance, Thermal Emittance and Solar Reflectance Index (SRI)

Solar Reflectance

To be considered "cool," products must have a Solar Reflectance of at least .25. Solar Reflectance is the fraction of the total solar energy that is reflected away from a surface.

Thermal Emittance

Thermal Emittance is the measure of a panel's ability to release heat that it has absorbed.

Solar Reflectance Index (SRI)

Put Solar Reflectance and Thermal Emittance together and you get the Solar Reflectance Index (SRI). SRI is calculated by using the values of solar reflectance, thermal emittance and a medium wind coefficient. The higher the SRI value, the lower its surface temperature and its heat gain into the building. Cool metal roofs coated with the COOL-pigmented PVDF resin achieve an SRI of 29-87, depending on the color.

Conventional roof surfaces have low reflectance (0.05 to 0.25) and high thermal emittance (typically over .85). Roof panels with both high reflectance and high emittance can reduce the surface temperature by as much as 30-50% based on color and geographic location, which will result in a reduced heat gain to the building, therefore reducing energy demand.

cool-scape™ Panel Colors

Color	Initial Solar Reflectance (IR)	Initial Thermal Emittance (IE)	Solar Reflectance Index (SRI)
Regal White	.72	0.86	87
Reflective White	.64	0.86	76
Warm White	.59	0.88	70
Light Stone	.58	0.86	68
Taupe Sand	.57	0.86	67
Surrey Beige	.51	0.86	58
Pearl Gray	.50	0.87	57
Light Bronze	.44	0.87	49
Slate Gray	.37	0.87	40
Terra Cotta	.35	0.85	36
Hemlock Green	.34	0.87	36
Colonial Red	.32	0.85	32
Medium Bronze	.30	0.87	31
Evergreen	.30	0.87	31
Dark Bronze	.29	0.85	29
Royal Blue	.29	0.85	29

Bare Galvalume

Initial	.77	0.08	72
3 Years	.51	0.19	26

Cool science isn't just a meaningless marketing term. It's a technology that is literally revolutionizing the building industry. Combating urban heat islands and high-energy consumption will require innovative products that meet or exceed even the most stringent industry requirements. Our cool-scape™ panel is that type of product.

Just think, the more energy costs rise, the more money you save with cool-scape™.

Film Properties	Test Method	Performance
Dry Film Thickness	ASTM D5796 Primer ASTM D1005	0.3 mils minimum Topcoat 1.0 mil system (+/- .05) Backer 0.5 mil system (+/- .05)
Specular Gloss	ASTM D523	Low gloss, 5-12% @ 60°
Dry Film Hardness	ASTM D3363	HB minimum
Film Adhesion - Dry, wet, boiling water	ASTM 3359	Excellent, no removal
Formability	ASTM D4145	2 T Bend - no removal
Abrasion Resistance - Falling Sand - Gardner Scratch - Taber Abrasion	ASTM D968 ASTM D2197 ASTM D4060	Exceeds 65 liters/mil 250-300 grams load CS 10 wheels/20mg loss/100 cycles
Chemical & Detergent Resistance	ASTM D1308	Excellent - no attack
Salt Spray Resistance	ASTM B117	Passes 1,000 hours, Galvalume
Humidity Resistance	ASTM D2247	Passes 1,000 hours, HDG/Galvalume
South Florida Weathering - Color Retention - Chalk Resistance	D2244 D4214	<5dE change after 35 years >8 chalk rating

These premium coatings have an optional 35-year paint finish warranty.
Contact AMS for information.



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