

PRODUCT SPECIFICATIONS

Solar 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.

Solar Reflectance Index (SRI)

Put Solar Reflectance and Thermal Emittance together and you get the Solar Reflective 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 consequently, the heat gain into the building. Cool metal roofs coated with the SmartKote COOL-pigmented PVDF resin achieve an SRI of 31-88, depending on the color.

Thermal Emittance

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

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 the energy demand.

SMARTKOTE PANEL COLORS

SMARTKOTE COLOR	INITIAL SOLAR REFLECTANCE (IR)	INITIAL THERMAL EMITTANCE (IE)	SOLAR REFLECTIVE INDEX (SRI)
Regal White	.72	0.85	88
Warm White	.62	0.84	73
Surrey Beige	.48	0.83	53
Slate Gray	.36	0.83	37
Dark Bronze	.31	0.87	32
Terra Cotta	.35	0.84	35
Evergreen	.31	0.85	31
Royal Blue	.30	0.86	31
Bare Aluminum Zinc Coated	.77	0.08	72

SMARTKOTE PVDF TECHNICAL INFORMATION

TEST	TEST METHODS	PERFORMANCE
Dry Film Thickness	ASTM D 5796 Primer ASTM D 1005	0.3 mils minimum Topcoat 0.7 mils system (+/- .05) Backer 0.5 mils 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 D3359	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 C.S. 10 wheel/20 mg 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 - Crack Resistance	D2244 D4214	<5dE change after 35 years >8 chalk rating



American Buildings Company
Marketing Information Line
888.307.4338
www.americanbuildingscompany.com

ABC - Atlantic Division
501 Golden Eagle Drive
LaCrosse, VA 23950
Tel: 706.562.8020
Fax: 706.562.8017

ABC - South Division
1150 State Docks Road
Eufaula, AL 36027
Tel: 334.688.2032
Fax: 334.688.2185

ABC - Midwest Division
901 W. Main Street
El Paso, IL 61738
Tel: 309.527.1500
Fax: 309.527.1522

ABC - West Division
2260 Tenaya Drive
Modesto, CA 95354
Tel: 209.236.0580
Fax: 209.236.0588