



December 3, 2019

Nucor Building Systems is constantly seeking ways to improve our product offering and remain the low cost supplier for our Builders. We are pleased to announce an improvement coming soon to our SP and PVDF color programs.

### **PVDF Color Program Changes:**

To provide customers with a larger selection of PVDF color options, Nucor Building Systems has added six new colors to the PVDF color lineup. In addition, some color names and/or color codes in eQuote have been changed to ensure consistency and clarity across our color programs. Please note, the six new colors are considered non-stock and extended lead times may apply.

- **New PVDF Colors Added:**
  - Reflective White (RF)
  - Pearl Gray (PG)
  - Desert Sand (DS)
  - Brite Red (BT)
  - Charcoal (CH)
  - Midnight Black (BL)
  
- **PVDF Color Name and Color Code Change:**
  - Medium Gray has been renamed Slate Gray (SG)

### **SP Color Program Changes:**

In our SP Color program, some color names and/or color codes in eQuote have been changed to ensure consistency and clarity across our color programs.

- **SP Color Name and Color Code Changes:**
  - Evergreen has been renamed Forest Green (FO)
  - Lightstone has been renamed Sandstone (SS)
  
- **SP Color Code Changes:**
  - Brick Red color code changed to (BD)
  - Sagebrush Tan color code changed to (SA)

New PVDF and SP color charts are attached and printed copies are available by request from your division.

Please reference the following chart with a full list of PVDF and SP colors and associated color codes; changes are labeled in shading.



## PVDF Cool Coatings Colors:

PVDF Color Name	Color Code
Reflective White <i>(new)</i>	RF
Pearl Gray <i>(new)</i>	PG
Desert Sand <i>(new)</i>	DS
Brite Red <i>(new)</i>	BT
Charcoal <i>(new)</i>	CH
Midnight Black <i>(new)</i>	BL
Regal White	RW
Warm White	WW
Surrey Beige	SU
Slate Gray <i>(formerly Medium Gray)</i>	SG
Royal Blue	RO
Terra Cotta	TC
Cypress Green	CY
Dark Bronze	DB

## SP Cool Coatings Colors:

SP Color Name	Color Code
Polar White	PW
Sandstone <i>(formerly Lightstone)</i>	SS
Fox Gray	FG
Sagebrush Tan	SA
Brick Red	BD
Aztec Blue	AB
Forest Green <i>(formerly Evergreen)</i>	FO
Burnished Slate	BS

Galvalume	Color Code
Galvalume	GM

**Critical Dates:** The new color program changes will be available in eQuote on December 6, 2019. Your Project Coordinator will review any color name changes to existing orders if applicable. For more information, contact your local Sales Representative or Project Coordinator.

### **Our Commitment**

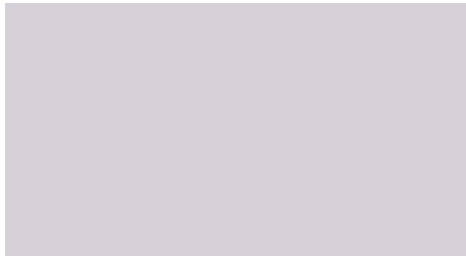
Nucor Building Systems is committed to ongoing improvements in all aspects of our business. This change is intended to enhance our product offerings and improve our costs and competitiveness in the market place. Your input and comments are always appreciated. If you have specific questions regarding this bulletin or any other area of our business, please contact your District Sales Manager or Project Coordinator.

# SP Cool Coatings

This cool silicone-polyester paint system utilizes a two-coat system that offers superior quality and durability.



a **NUCOR** company



**Polar White** †

IR .67 SRI 81



**Sandstone** †

IR .59 SRI 69



**Fox Gray** †

IR .51 SRI 58



**Sagebrush Tan** †

IR .51 SRI 59



**Brick Red** †

IR .38 SRI 40



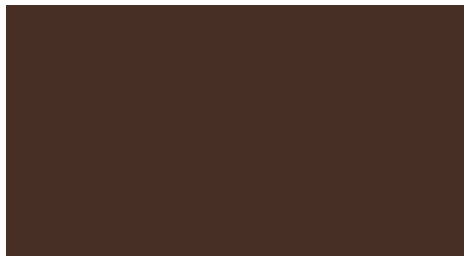
**Aztec Blue** †

IR .27 SRI 26



**Forest Green** †

IR .27 SRI 25



**Burnished Slate** †

IR .32 SRI 32



**Galvalume** \*\*

IR .77 SRI 72

\*Non-Stock Color: Extended lead times may apply. \*The Galvalume coating process is likely to result in variances in spangle (size, number, and reflection) from coil to coil which may result in noticeable shade variations. Galvalume is also subject to variable weathering and may appear to have different shades due to weathering characteristics. These shade variations are not cause for rejection. † ENERGY STAR® Qualified Color. All SP colors have a 25-year finish warranty. Colors shown closely approximate actual coating colors. These colors utilize Cool Coating Technology. The term "TBS" on the Order Document refers to "To Be Selected" from standard SP colors as shown on this chart.



# SP Cool Coatings

## Product Specifications



a NUCOR® company

### 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.

#### 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 consequently, the heat gain into the building. Metal roofs coated with SP Cool Coatings achieve an SRI of 25-81, 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 the energy demand.

GALVALUME® is a registered trademark of BIEC International Inc., and some of its licensed producers.

### SP COOL PANEL COLORS

SP Cool Color	Initial Solar Reflectance (IR)	Initial Thermal Emittance	Solar Reflectance Index (SRI)
Polar White	.67	0.83	81
Sandstone	.59	0.84	69
Fox Gray	.51	0.85	58
Sagebrush Tan	.51	0.85	59
Brick Red	.38	0.85	40
Aztec Blue	.27	0.85	26
Forest Green	.27	0.83	25
Burnished Slate	.32	0.85	32
Galvalume®	.77	0.08	72

### SP COOL TECHNICAL INFORMATION

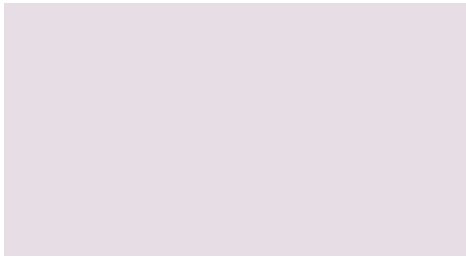
Test	Test Methods	Performance
Dry Film Thickness	ASTM D1005	0.15 - 0.30 mil primer 0.70 - 0.90 mil topcoat
Gloss	ASTM D523 @ 60°	10 - 80+
Solar Reflectance	ASTM E903, ASTM E1918 Using portable reflectometer	0.25 (25%) min.
Emissivity	ASTM C1371, ASTM E408	0.80 (80%) min.
Pencil Hardness	ASTM D3363	F min.
Flexibility	T-Bend, ASTM D4145	2 T-bend, No pick off
Adhesion	ASTM D3359	1.5 x metal thickness, No adhesion loss
Reverse Impact	ASTM D2794	2 x gauge or 80 lbs.
Abrasion, Falling Sand	ASTM D968	25 - 40 l/mil
Mortar Resistance	ASTM C267	No effect
Detergent Resistance	ASTM D2248 3% detergent @ 100°F (72 hrs.)	No effect
Acid Resistance	ASTM D1308 10% muriatic acid - 15 min. 20% sulfuric acid - 24 hrs.	No effect No effect
Acid Rain Test	Kesternich SO2, DIN 50018	10 cycles min. No objectionable color change
Alkali Resistance	ASTM D1308 10% , 20% NaOH, 1 hr.	No effect
Salt Spray Resistance	ASTM B117 5% salt fog @ 95°F	Passes 1000 hrs.
Humidity Resistance	ASTM D714, ASTM D2247 100% relative humidity @ 95°F	Passes 1000 hrs. No blisters, cracks or peeling
Exterior Exposure	ASTM D2244, ASTM D4214 10 yrs. @ 45°F, South Florida	Max. 5 fade Max. 8 chalk

# PVDF Cool Coatings

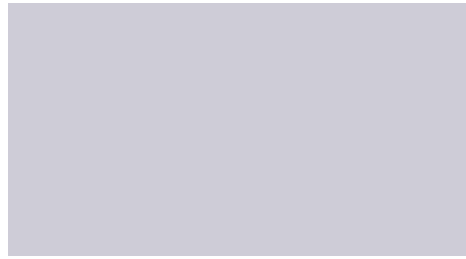
PVDF utilizes a two-coat system featuring fade resistant color, incredible durability, and environmentally-friendly “cool” technology.



a **NUCOR** company



**Regal White** <sup>†</sup> IR .72 SRI 88



**Reflective White** <sup>\*\*</sup> IR .63 SRI 76



**Warm White** <sup>†</sup> IR .63 SRI 76



**Pearl Gray** <sup>\*\*</sup> IR .47 SRI 54



**Desert Sand** <sup>\*\*</sup> IR .57 SRI 67



**Surrey Beige** <sup>†</sup> IR .50 SRI 56



**Slate Gray** <sup>†</sup> IR .37 SRI 40



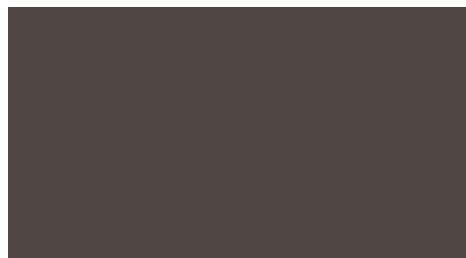
**Royal Blue** <sup>†</sup> IR .30 SRI 30



**Terra Cotta** <sup>†</sup> IR .36 SRI 38



**Cypress Green** <sup>†</sup> IR .31 SRI 31



**Dark Bronze** <sup>†</sup> IR .32 SRI 33



**Brite Red** <sup>\*\*</sup> IR .38 SRI 40



**Charcoal** <sup>\*\*</sup> IR .32 SRI 34



**Midnight Black** <sup>\*\*</sup> IR .27 SRI 26



**Galvalume** <sup>\*\*</sup> IR .77 SRI 72

\*Non-Stock Color: Extended lead times may apply. \*The Galvalume coating process is likely to result in variances in spangle (size, number, and reflection) from coil to coil which may result in noticeable shade variations. Galvalume is also subject to variable weathering and may appear to have different shades due to weathering characteristics. These shade variations are not cause for rejection. <sup>†</sup>ENERGY STAR<sup>®</sup> Qualified Color. All standard PVDF colors have a 35-year finish warranty. Colors shown closely approximate actual coating colors. These colors utilize Cool Coating Technology. The term “TBK” on the Order Document refers to “To Be Selected” from standard PVDF colors as shown on this chart. Please note that PVDF is a slight upcharge over SP.



# PVDF Cool Coatings

## Product Specifications



a NUCOR® company

### 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.

#### 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 consequently, the heat gain into the building. Metal roofs coated with pigmented PVDF resin achieve an SRI of 26-88, 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 the energy demand.

GALVALUME® is a registered trademark of BIEC International Inc., and some of its licensed producers.

### PVDF COOL PANEL COLORS

PVDF Cool Color	Initial Solar Reflectance (IR)	Initial Thermal Emittance	Solar Reflectance Index (SRI)
Regal White	.72	0.85	88
Reflective White	.63	0.86	76
Warm White	.63	0.86	76
Pearl Gray	.47	0.86	54
Desert Sand	.57	0.86	67
Surrey Beige	.50	0.85	56
Slate Gray	.37	0.85	40
Royal Blue	.30	0.85	30
Terra Cotta	.36	0.85	38
Cypress Green	.31	0.85	31
Dark Bronze	.32	0.86	33
Brite Red	.38	0.84	40
Charcoal	.32	0.86	34
Midnight Black	.27	0.85	26
Galvalume®	.77	0.08	72

### PVDF COOL TECHNICAL INFORMATION

Test	Test Methods	Performance
Dry Film Thickness	ASTM D1400	0.15 - 0.30 mil primer 0.70 - 0.90 mil topcoat
Gloss	ASTM D523 @ 60°	25 - 35
Solar Reflectance	ASTM E903 Steep Slope: Low Slope:	>25% Initial >15% after 3 years >65% Initial >50% after 3 years
Emissivity	ASTM C1371, ASTM E408	0.80 (80%) min.
Pencil Hardness	ASTM D3363	F-2H
Flexibility	T-Bend, ASTM D4145	0 - 2 T-Bend; No pick off
Adhesion	ASTM D3359	No adhesion loss
Reverse Impact	ASTM D2794	No cracking or adhesion loss
Abrasion, Falling Sand	ASTM D968	65 - 85 l/mil
Mortar Resistance	ASTM C267	No effect
Detergent Resistance	ASTM D2248 3% detergent @ 100°F (72 hrs.)	No Effect
Acid Resistance	ASTM D1308 10% muriatic acid - 24 hrs. 20% sulfuric acid - 18 hrs.	No effect No effect
Acid Rain Test	Kesternich SO <sub>2</sub> , DIN 50018	15 cycles min. No objectionable color change
Alkali Resistance	ASTM D1308 10% , 25% NaOH, 1 hr.	No effect
Salt Spray Resistance	ASTM B117 5% salt fog @ 95°F	None or few #8 blisters; Max. average 1/8" Scribe creep Passes 1000 hrs.
Humidity Resistance	ASTM D714, ASTM D2247 100% relative humidity @ 95°F	Passes 1500 hrs. No #8 blisters
Exterior Exposure	ASTM D2244, ASTM D 4214 10 yrs. @ 45°F, South Florida	Max. 5 fade Max. 8 chalk