

# TECHO — BLOC

INSPIRING ARTSCAPES



## SOLAR REFLECTANCE & LEED CREDITS

Solar reflectance index (SRI) is a value that incorporates solar reflectance (SR) and thermal emittance in a single measure. The SRI is an indicator of how well a surface reflects (reflectance) and release absorbed solar radiation (emittance). The lower the SRI, the hotter a material is likely to become in sunlight. Dark pavement surfaces tend to have lower solar reflectance values than lighter pavement surfaces. Thus, cautious selection of pavement surface colors can help reduce heat islands which cause urban areas to stay warmer and contributes to air pollution and increased energy consumption. Nowadays, it is not uncommon for some municipalities in North America to require the use of paving materials with an initial SRI of 29.

Furthermore, for LEED certification there are credit requirements for Sustainable Sites Credit: Heat Island Reduction.

The following are some key elements for Nonroof and Parking under cover applications (see LEED v4.1 for a thorough information):

- **Nonroof** (2 points except Healthcare, 1-point Healthcare): Use of paving materials with an initial SR value of at least 0.33.
- **Parking under cover** (1 point): Any roof used to shade or cover parking must have a three-year aged SRI of at least 32 (if three-year aged value information is not available, use materials with an initial SRI of at least 39 at installation).

Techo-Bloc light-colored paving units contribute to the reduction of heat island effects and to obtain LEED points. The table to the right summarizes the colors of Techo-Bloc paving units with SR of at least 0.33 and/or SRI of at least 29.

*The values shown in the table may change slightly for the same color due to variations in local aggregates. Contact your Techo-Bloc Representative for our current list of SR and SRI values*

**TECHO-BLOC COLORS WITH SR OF AT LEAST 0.33 AND/OR SRI OF AT LEAST 29**

FINISH	COLOR	SWATCH	SOLAR REFLECTANCE <sup>1</sup>	SOLAR REFLECTANCE INDEX <sup>2</sup>
<b>HD<sup>2+</sup> Smooth</b>	Beige Cream		0.35	38
	Greyed Nickel		0.36	39
<b>HD<sup>2</sup> Smooth</b>	Beige Cream		0.35	38
	Greyed Nickel		0.33	36
<b>Smooth</b>	Beige Cream		0.33	36
	Greyed Nickel		0.34	37
<b>HD<sup>2</sup> Polished</b>	Beige Cream		0.38	42
	Greyed Nickel		0.37	41
<b>HD<sup>2</sup> Granitex</b>	Beige Cream		0.33	36
	Greyed Nickel		0.39	43
<b>HD<sup>2</sup> Slate (wetcast)</b>	Victoria		0.31	33
<b>HD<sup>2</sup> Brushed Travertine (wetcast)</b>	Ivory		0.35	38

### NOTES

1. Solar Reflectance measurements in accordance with ASTM C1549 “Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer”.
2. Solar Reflectance Index (SRI) calculated in accordance with ASTM E1980 “Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces”.