Data for Weatherbond / VersiGard

Radiative Properties for ENERGY STAR®, Cool Roof Rating Council (CRRC) and LEED™

	TEST METHOD	VERSIGARD WHITE EPDM
ENERGY STAR initial solar reflectance	Solar Spectrum Reflectometer	0.84
ENERGY STAR solar reflectance after 3 years	Solar Spectrum Reflectometer (after cleaning)	0.80
CRRC initial solar reflectance	ASTM C1549	0.76
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	pending
CRRC initial thermal emittance	ASTM C1371	0.90
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	pending
LEED thermal emittance	ASTM E408	0.91
SRI (Solar Reflectance Index)	ASTM E1980	105

An ENERGY STAR qualified low slope roof product must have an initial solar reflectance of at least 0.65 and a 3 year aged solar reflectance of at least 0.50. Cleaning of the aged roof surface is permitted by the ENERGY STAR test protocol.

The Cool Roof Rating Council (CRRC) does not specify minimums for reflectance or emittance but they do require specific protocols for testing and reporting. Cleaning of the aged roof surface is **not** permitted for determination of radiative properties after 3 years.

A LEED "point" may be earned if a roof material is ENERGY STAR qualified **and** has a thermal emittance of at least 0.90 as determined by ASTM E408.

Solar Reflectance Index (SRI) is calculated per ASTM E 1980. The SRI is a measure of the roof's ability to reject solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. Materials with the highest SRI values are the coolest choices for roofing. Due to the way SRI is defined, particularly hot materials can even take slightly negative values, and particularly cool materials can even exceed 100.

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