

5.1.5 Properties of Cool Roofing Materials (1)

	<u>Solar Reflectance (2)</u>	<u>Infrared Emittance (3)</u>
<u>Asphalt Shingles</u>		
Shasta White	0.26	0.91
Generic White	0.25	0.91
Generic Grey	0.22	0.91
Light Brown	0.19	0.91
Medium Brown	0.12	0.91
Generic Black	0.05	0.91
<u>White Coatings</u>		
White Coating (1 coat, 8 mil)	0.80	0.91
White Coating (2 coats, 20 mil)	0.85	0.91
<u>Aluminum Coatings</u>		
Aluminum	0.61	0.25
Fibered on Black	0.40	0.56
<u>Membranes</u>		
Gray EPDM (4)	0.23	0.87
White EPDM (4)	0.69	0.87
T-EPDM (4)	0.81	0.92
Light Gravel on Built-Up Roof	0.34	0.90
<u>Metal Roof</u>		
New, Bare Galvanized Steel	0.61	0.04
<u>Tiles</u>		
Red Clay	0.33	0.90
White Concrete	0.73	0.90
Fiber Cement, Pewter Gray	0.25	0.90

Note(s): 1) A good cool-roofing material has high solar reflectance and high infrared emittance. 2) Solar Reflectance is the percentage of incident solar radiation that is reflected by the material. 3) A number between 0 and 1 that describes the ability of a material to shed heat. The lower the value, the more heat the material retains. 4) Ethylene propylene diene monomer rubber material.

Source(s): Lawrence Berkley National Laboratory, Cool Roofing Materials Database, <http://eetd.lbl.gov/coolroofs/>.