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Building Enclosure Science & Technology

Cool Roof Rating Council

Keeping Cool for 20 Years

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CRRC Deputy Director
April 18, 2018

CRRC COOL ROOF RATING COUNCIL ®

Technical Session WE2B: *Roofs*

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Cool Roofs 101

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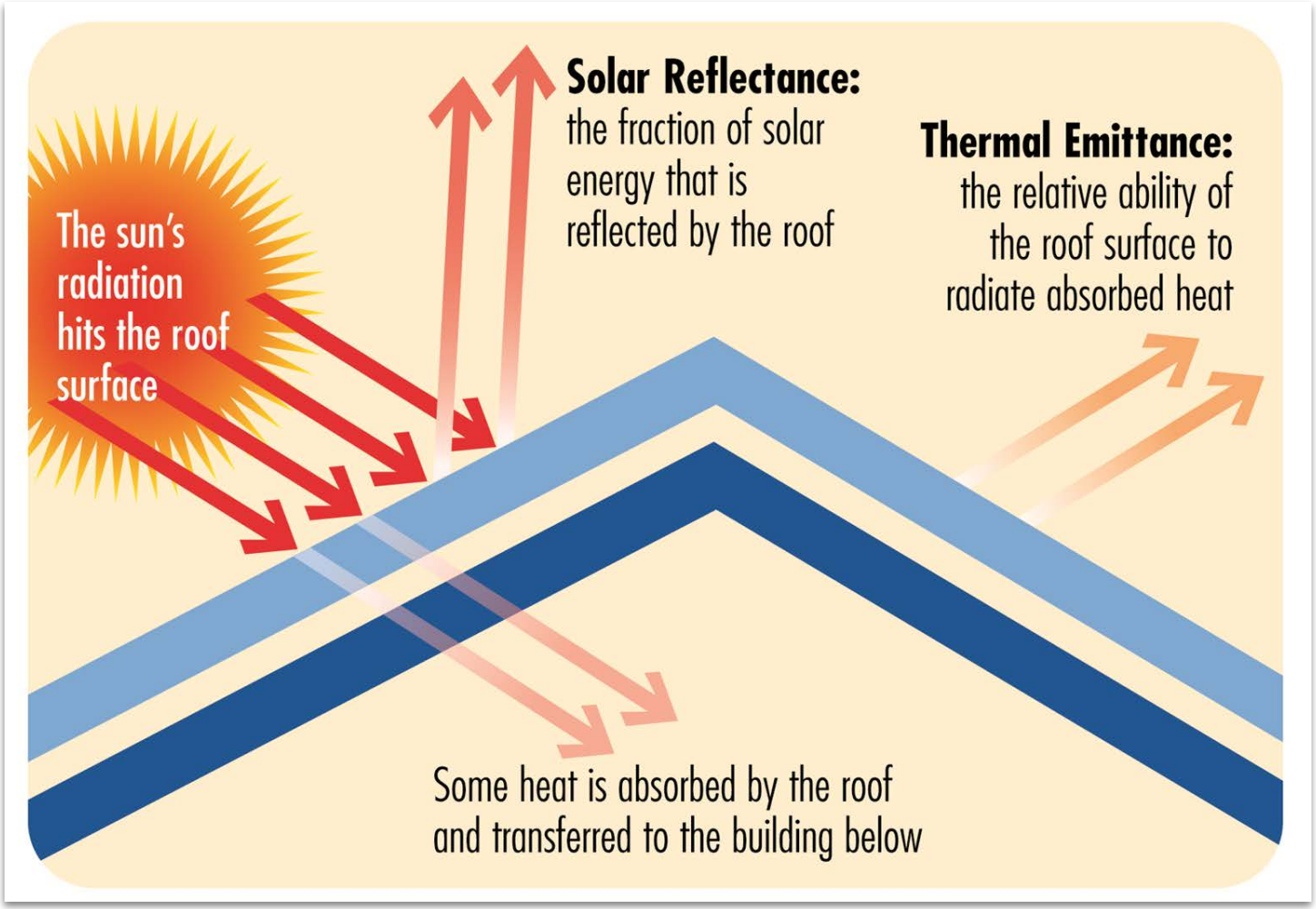
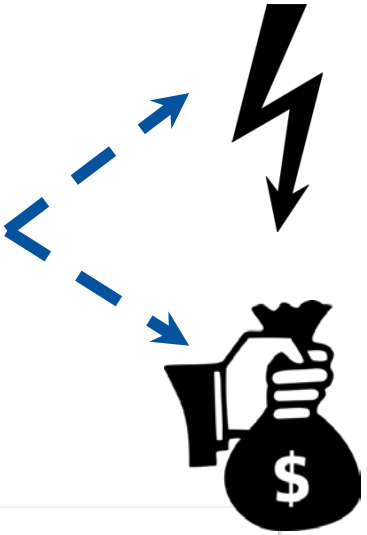
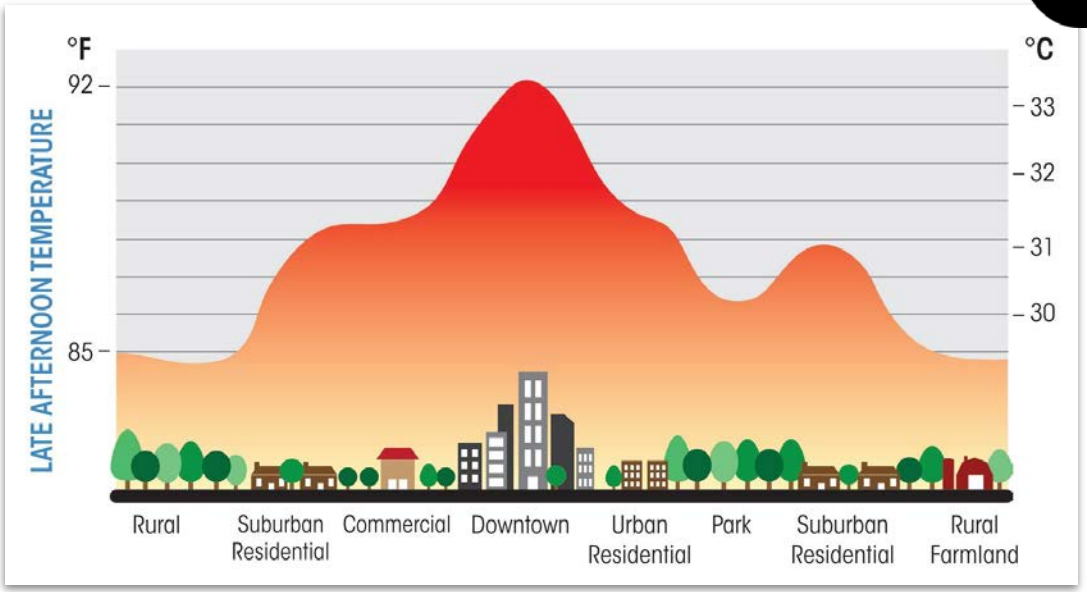
Cool Roofs 101



Cool Roof Benefits





CRRC Background

- Established in 1998 as 501(c)(3) nonprofit
- Third-party product rating organization for the roofing industry
- ENERGY STAR® Certification Body
- ANSI Accredited Standards Developer
  - Currently maintaining ANSI/CRRC S100 (2016 edition)
- ISO 17065 Accredited Organization
- ASTM Organizational Member

Certificate 3146.01

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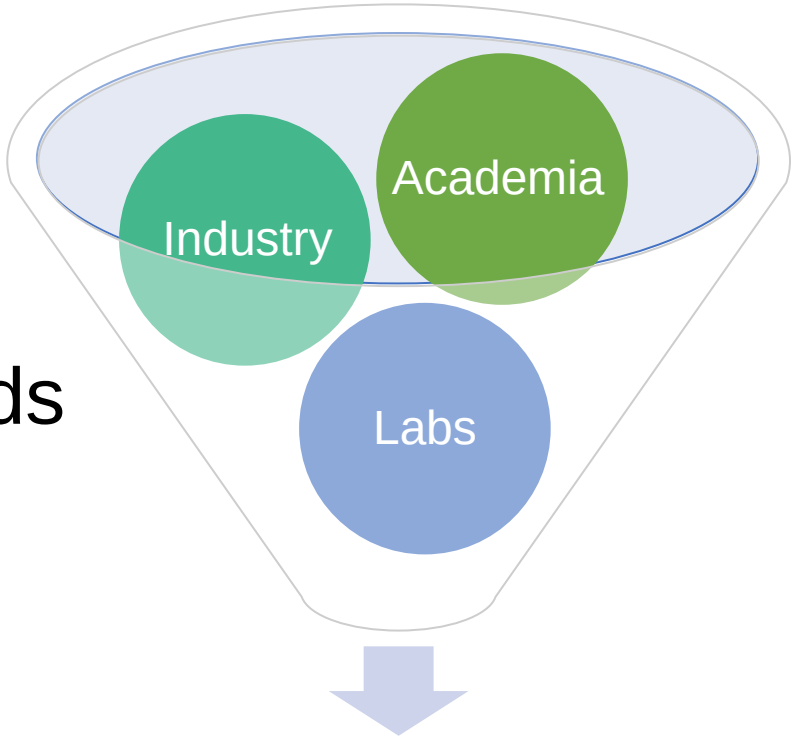
CRRC Founding Partners

& Roofing Industry

CRRC Structure

- Diverse Membership
- Board of Directors
- Technical Committee
- Ratings, Codes & Standards Committee
- International Committee
- ANSI Consensus Body



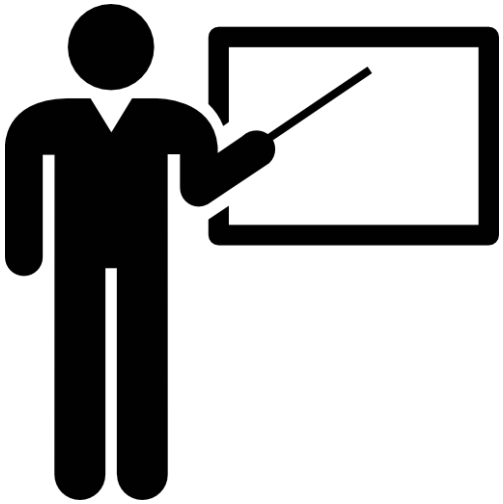
CRRC Membership*

* Members also include architects, designers, builders, contractors, etc.

CRRC Mission

Ratings

Research



Education

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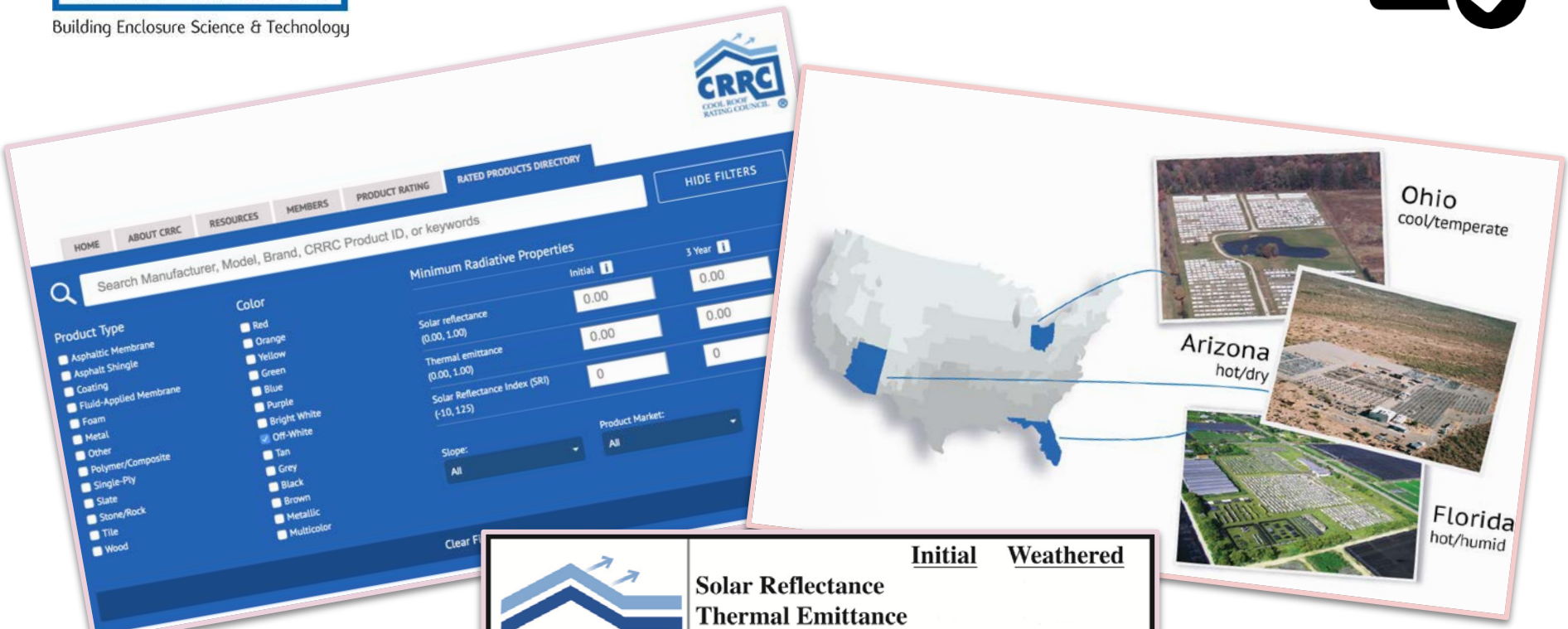
Product Rating Program



CRRC
COOL ROOF
RATING COUNCIL ®

	Initial	Weathered
Solar Reflectance		
Thermal Emittance		
Rated Product ID Number	_ _ _ _	
Licensed Seller ID Number	_ _ _ _	
Classification	Production Line	

Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.

Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.

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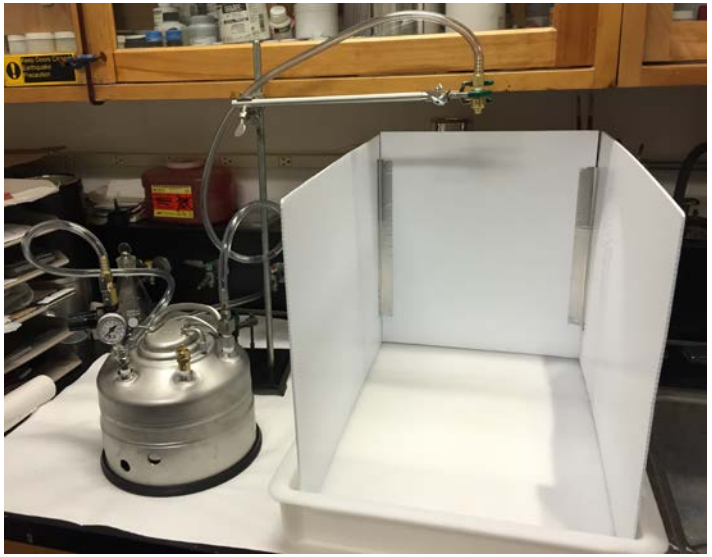
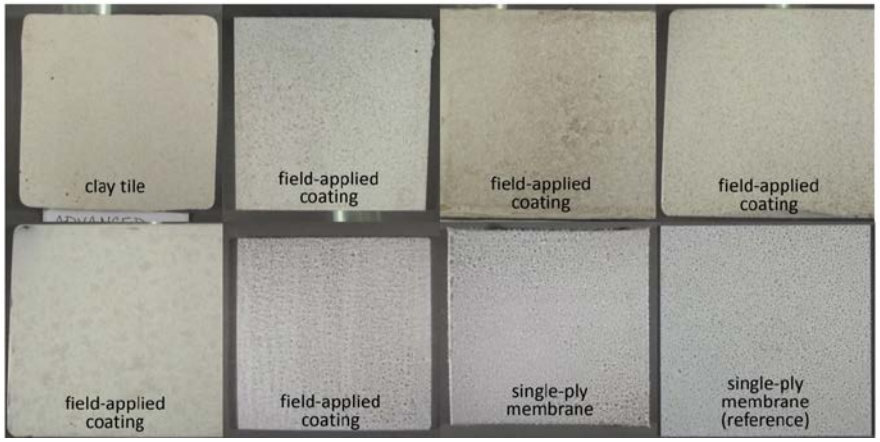
Rapid Ratings Program





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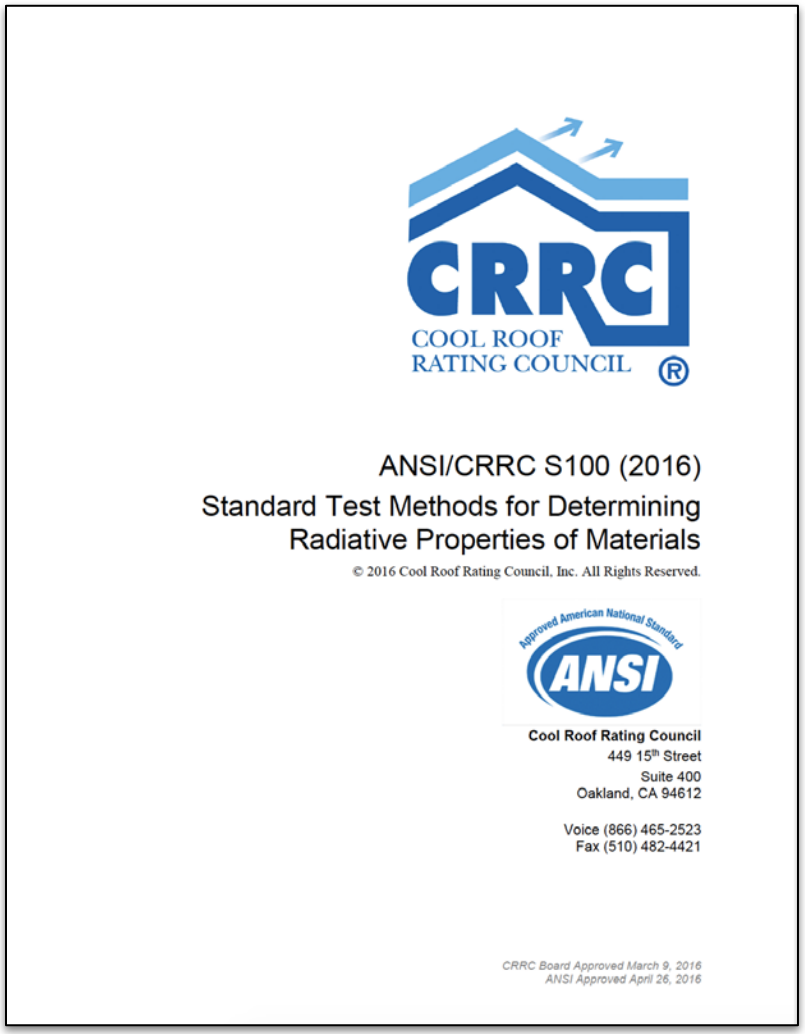
CRRC in Building Codes & Product Standards



ASHRAE

ICC
INTERNATIONAL
CODE COUNCIL

RESNET
RESIDENTIAL ENERGY SERVICES NETWORK

U.S. GREEN BUILDING COUNCIL
LEED CERTIFIED
USGBC

energy
ENERGY STAR

STATE OF CALIFORNIA
ENERGY COMMISSION

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Technical Research

Development of method to measure reflectance of Directionally Reflective Materials (DRM)

Solar Energy Materials & Solar Cells 124 (2014) 192–210

Contents lists available at ScienceDirect

Solar Energy Materials & Solar Cells

journal homepage: www.elsevier.com/locate/solmat

Modeling and labeling heterogeneous directional reflective roofing materials

Hashem Akbari*, Ali Gholizadeh Touchaei

Designation: C1864 – 17

Standard Test Method for
Determination of Solar Reflectance of Directionally Reflective Material Using Portable Solar Reflectometer[1]

Upcoming Research

Comparison of Solar Reflectance Test Methods

Designation: E1918 – 16

Standard Test Method for
Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field[1]

Designation: C1549 – 16

Standard Test Method for
Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer[1]

Designation: E903 – 12

Standard Test Method for
Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres[1]

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Working Groups

- Method Evaluation
- Methods & Instruments
- Rough Substrates
- Colorimetry
- Random Testing

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Educational Resources

www.coolroofs.org

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Rated Products Directory

CRRC COOL ROOF RATING COUNCIL

www.coolroofs.org

- Free, online resource
- Find and compare roofing products
- Determine compliance with building or energy codes
- Receive credits for voluntary programs (e.g., LEED)

HOME | ABOUT CRRC | RESOURCES | MEMBERS | PRODUCT RATING | RATED PRODUCTS DIRECTORY

Search Manufacturer, Model, Brand, CRRC Product ID, or keywords

HIDE FILTERS

Product Type

- [ ] Asphaltic Membrane
- [ ] Asphalt Shingle
- [ ] Coating
- [ ] Fluid-Applied Membrane
- [ ] Foam
- [ ] Metal
- [ ] Other
- [ ] Polymer/Composite
- [x] Single-Ply
- [ ] Slate
- [ ] Stone/Rock
- [ ] Tile
- [ ] Wood

Color

- [ ] Red
- [ ] Orange
- [ ] Yellow
- [ ] Green
- [ ] Blue
- [ ] Purple
- [ ] Bright White
- [ ] Off-White
- [ ] Tan
- [ ] Grey
- [ ] Black
- [ ] Brown
- [ ] Metallic
- [ ] Multicolor

Minimum Radiative Properties

	Initial	3 Year
Solar reflectance (0.00, 1.00)	0.9	0.75
Thermal emittance (0.00, 1.00)	.85	.70
Solar Reflectance Index (SRI) (-10, 125)	0	0

Slope: All

Product Market: End-User

Clear Filters ×

2 SEARCH RESULTS

Please note that the CRRC does not set a minimum definition for "cool", the CRRC simply lists the measured radiative property values on our Directory. A product's placement on the Directory does not mean that the product is "cool" as defined by any particular code body or program.

*CRRC Rapid Ratings: These are interim laboratory-aged values that simulate weathered values. These values will be replaced with the measured three-year aged values upon completion of the weathering process. SRI values calculated using Rapid Ratings may change once the aged rating replaces the interim rating.

Showing 1-2 of 2 results

CRRC PROD. ID	MANUFACTURER	BRAND AND MODEL	PRODUCT TYPE	COLOR	SOLAR RELECTANCE		THERMAL EMITTANCE		SRI		MORE INFO
					INITIAL	3 YEAR	INITIAL	3 YEAR	INITIAL	3 YEAR	
1116-0002	Renolit Belgium NV	Alkorplan F 35276 Alkorbright 2001 - 1.5mm	Single-Ply	Bright White	0.91	0.76	0.85	0.78	115	92	+
1116-0004	Renolit Belgium NV	Alkortec F 35196 - 1.5mm	Single-Ply	Bright White	0.90	0.81	0.85	0.79	114	100	+

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Lab Training Workshops

How to Get Involved

- Become a CRRC Member

  Membership Information
  http://coolroofs.org/members/become-a-member

- Participate in Technical Committee and/or working groups

- Serve on our ANSI/CRRC S100 Consensus Body

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