



LEARN ABOUT THE CRRC WALL RATING PROGRAM:

INFORMATION FOR MANUFACTURERS, END-USERS, AND POLICYMAKERS

ABOUT COOL EXTERIOR WALLS

Cool exterior walls are walls with surfaces that efficiently reflect solar energy and radiate heat. Cool exterior walls are available in a variety of colors and styles – they aren't necessarily white. For example, some "cool" products use darker-colored pigments that are highly reflective in the near infrared (non-visible) portion of the solar spectrum.

The two basic characteristics that determine the "coolness" of a wall surface material are solar reflectance and thermal emittance. Both properties are measured on a scale from 0 to 1, where 1 means 100% reflective or emissive.

This illustration describes the flow of radiant energy as heat between the sun, wall surface, building interior, and surroundings. The higher the solar reflectance, the more solar energy is reflected away from the wall surface. Some of the solar energy is absorbed by the wall as heat. The higher the thermal emittance, the more absorbed heat is radiated away from the wall surface.

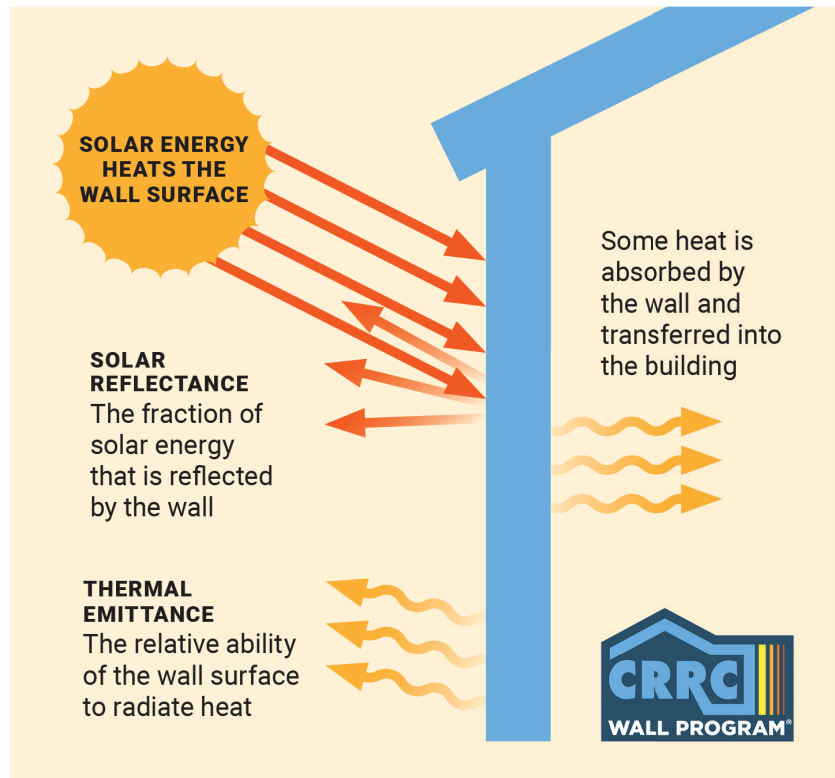


IMAGE CREDIT: COOL ROOF RATING COUNCIL

COOL EXTERIOR WALLS HELP:



Save energy¹



Reduce ground-level ozone³



Reduce peak power demand¹



Reduce the urban heat island effect²



Improve occupant comfort⁴

NEW CRRC WALL PRODUCT RATING PROGRAM

- New rating program launched in January 2022
- Third-party rating program for radiative properties of exterior wall products
- Program requirements developed and maintained by a body of experts
- Data provided by Accredited Independent Test Labs and CRRC-approved manufacturer test labs
- Three-year natural weathering by accredited test farms in three designated U.S. climates
- Informs end users on the radiative properties of different wall products, which can impact energy efficiency and heat island mitigation, especially in hot climates

1. Rosado, P. J., et al. (2019). Potential benefits of cool walls on residential and commercial buildings across California and the United States: Conserving energy, saving money, and reducing emission of greenhouse gases and air pollutants. *Energy and Buildings*, 199, 588–607. <https://doi.org/10.1016/j.enbuild.2019.02.028>

2. Zhang, J., et al. (2018). Systematic comparison of the influence of cool wall versus cool roof adoption on urban climate in the Los Angeles basin. *Environmental Science & Technology*, 52(19), 11188–11197. <https://doi.org/10.1021/acs.est.8b00732>

3. Zhang, J., et al. (2019). Investigating the urban air quality effects of cool walls and cool roofs in Southern California. *Environmental Science & Technology*, 53(13), 7532–7542. <https://doi.org/10.1021/acs.est.9b00626>


4. Hernández-Pérez, I., Álvarez, G., Xamán, J., Zavala-Guillén, I., Arce, J., & Simá, E. (2014). Thermal performance of reflective materials applied to exterior building components—A review. *Energy and Buildings*, 80, 81–105. <https://doi.org/10.1016/j.enbuild.2014.05.008>

FOR MANUFACTURERS

BENEFITS OF OBTAINING A CRRC RATING

- Ratings published on the free online Rated Wall Products Directory (<https://coolroofs.org/directory/wall>)
- Ability to use Rated Product Logo and Labels to communicate ratings to end users
- Demonstrate compliance with growing list of codes, standards, and programs that promote the use of cool exterior walls, including LEED v4.1
- Market the energy and environmental benefits of your products



	Wall Rated Product ID #: W000-0000		
		Initial	Aged
	Solar Reflectance	0.00	Pending
	Thermal Emittance	0.00	Pending
<small>The ratings above are subject to CRRC rating program conditions, requirements, and limitations. Visit coolroofs.org for important information and disclaimers about CRRC rating conditions, requirements, and limitations.</small>			


START RATING PRODUCTS TODAY!

- Learn more at <https://coolroofs.org/programs/wall-rating-program>
- Apply to become a Wall Licensee: <https://coolroofs.org/programs/wall-rating-program/become-a-wall-licensee>

Contact walls@coolroofs.org with questions

FOR END USERS

HOW TO FIND CRRC-RATED WALL PRODUCTS

- Visit <https://coolroofs.org/directory/wall>
- Use the search bar to search keywords
- Use the filters to narrow products by product type, color, solar reflectance, thermal emittance, manufacturer, and product market
- Use the sort feature to organize results by CRRC Product ID; Manufacturer; Brand/Model; and Initial and Aged Solar Reflectance and Thermal Emittance
- Use  to obtain a link to your dynamic search results!

INITIAL VERSUS 3-YEAR AGED VALUES

INITIAL: The measured solar reflectance and thermal emittance of a new product sample.

AGED: The measured solar reflectance and thermal emittance of a product that has undergone three-year weathering in three designated U.S. climates. A "pending" aged value means a product is still undergoing the weathering process.



LEARN MORE AT <https://coolroofs.org/resources/end-user-information>

FOR POLICYMAKERS

REFERENCING CRRC WALL RATINGS IN CODES, PROGRAMS, AND STANDARDS

- Both standard and “cool” products can obtain CRRC ratings
- Definition of “cool” and performance requirements are specified by individual codes and programs
- CRRC ratings provide third-party assurance of accurate values
- Growing list of codes, programs, and standards already have reflective wall requirements

ASHRAE Standard 90.1-2022
CALGreen 2022
Green Globes Standard 2021
Green Seal Standard GS-11-2021
Hawaii Energy Building Code
IgCC 2021
LEED v4.1 Pilot Credit SSpC 154

CRRC RATINGS CAN BE A VALUABLE RESOURCE FOR ESTABLISHING:

- Energy Efficiency Financial Incentives
- Procurement Plans
- Building Energy Code Requirements
- Climate Policy Goals
- Public Health Goals
- Air Quality Goals
- Resilience & Sustainability Plans
- Urban Heat Island Mitigation Interventions
- Green Building Certification Programs

“Adopting a cool walls requirement into Hawaii’s building code was a sensible solution that saves energy and reduces construction costs.”

— Howard Wiig
Hawaii State Energy Office

LEARN MORE AT <https://coolroofs.org/resources/policy-program-developers>

For real-time updates on the Wall Program, follow the CRRC on social media!



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Cool Roof Rating Council

The CRRC was established in 1998 as a 501(c)(3) nonprofit organization that develops fair, accurate, and credible methods for evaluating and labeling the surface radiative properties (solar reflectance and thermal emittance) of roofing and exterior wall products.

The CRRC is an accredited ISO/IEC 17065 product certification body and an ANSI Accredited Standards Developer Organization.

LEARN MORE AT <https://coolroofs.org>

CONTACT THE CRRC

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