



Improvements to Testing Methods Give CMAST Greater Precision

The National Fenestration Rating Council (NFRC) is a nonprofit research and standards writing organization. Its goals include developing energy efficient standards and test methods for fenestration products, more commonly known as windows, doors, skylights, and curtain wall systems.

As part of our commitment to providing fair, accurate, and credible energy performance ratings, NFRC continually monitors the effectiveness of the Component Modeling Approach Software Tool (CMAST) and fine tunes the calculations that drive its functionality.

This fine tuning ensures CMAST always provides users with the highest possible level of precision regarding the energy performance of fenestration products

CMAST – Getting Better All the Time

Because NFRC's work is ongoing and requires continual upgrades and advancements to provide consumers -- including architects, specifiers, builders, and homeowners - with the most up-to-date energy performance ratings, it naturally follows that these ratings may change from time-to-time.

The most important thing to bear in mind, however, is that this does not mean the fenestration product itself has changed. Instead, it means the method of calculating the energy performance -- such as the algorithm -- has changed.

It is this change in the method of calculation that may affect the overall energy performance ratings of a given fenestration product. Be sure to remember though -- it's not the product -- it's how we calculate the performance that matters.

Let's Look at an Example

A specific example may help clarify this point. As noted above, ongoing improvements to the algorithms mean that the ratings produced in earlier versions of CMA may vary from ratings that are produced in the current version of CMA.

Think of it like this: A bid report produced from an earlier version of CMAST that reported a .40 U-factor for a casement window may later be reported as a 0.41 or 0.42 in the most upgraded and current version.

This does not mean the product has changed. Instead, it means that the algorithm used to calculate the U-factor has been modified in an effort to provide the most accurate U-factor rating possible.



Change Leads to Progress


NFRC works constantly to find new and improved methods for calculating energy performance, developing greater precision, and serving CMAST users. That means change is inevitable, but the one thing that will always remain the same is NFRC's dedication to keeping you informed.

Communicating the changes that lead to progress and help our industry grow is one of NFRC's main priorities.

That's why NFRC representatives are always available to answer your questions about CMAST, energy performance calculations, and any other questions you may have.

Please contact us at 301-589-1776 or visit www.nfrc.org.

The NFRC Label

		World's Best Window Co. Casement ABC-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	0.30	0.30
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance	Air Leakage (U.S. / I-P)	0.51	0.2
Condensation Resistance		51	—
<small>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org</small>			

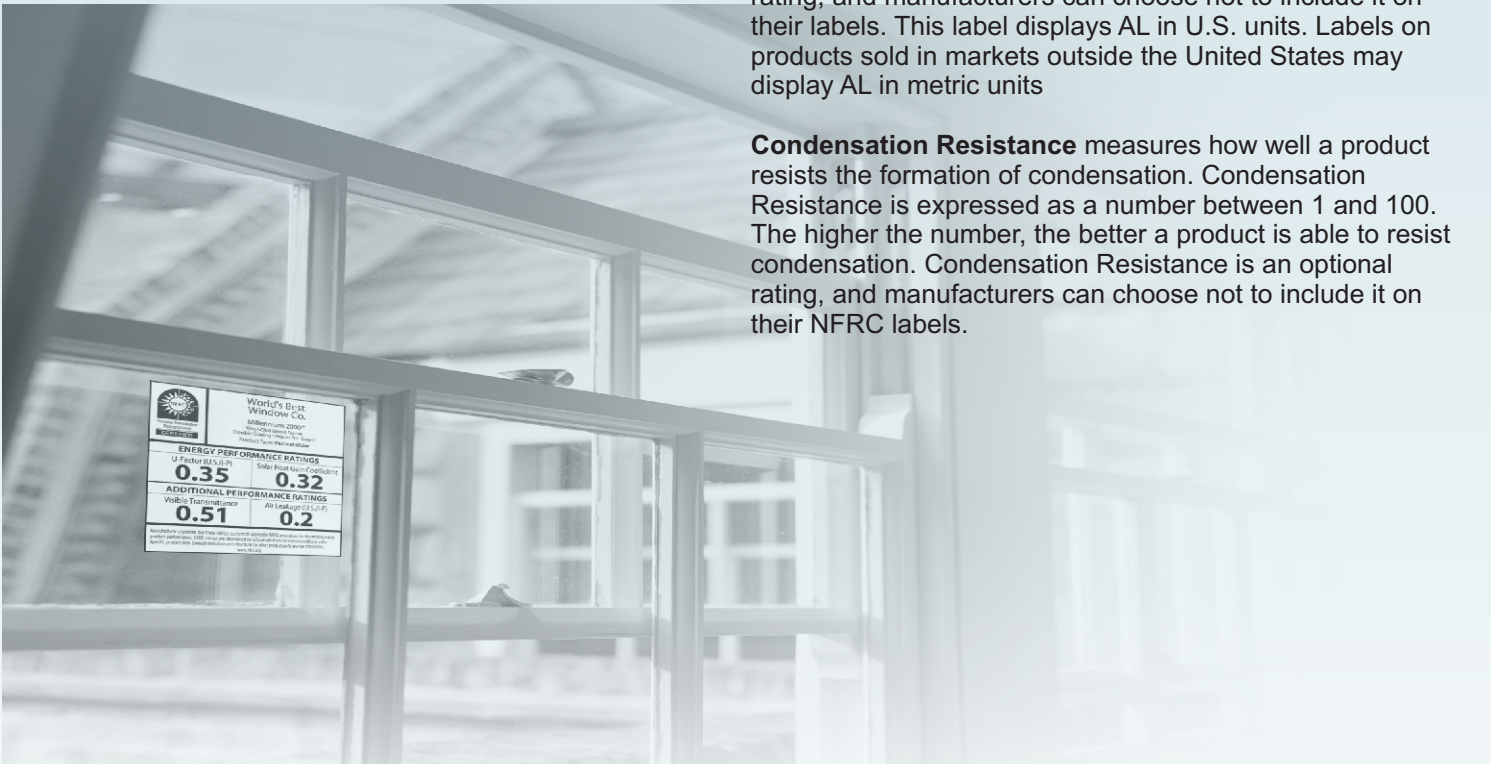
U-factor measures how well a product prevents heat from escaping a home or building. U-factor ratings generally fall between 0.20 and 1.20. The lower the U-factor, the better a product is at keeping heat in. U-factor is particularly important during the winter heating season. This label displays U-factor in U.S. units. Labels on products sold in markets outside the United States may display U-factor in metric units.

Solar Heat Gain Coefficient (SHGC) measures how well a product blocks heat from the sun. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the better a product is at blocking unwanted heat gain. Blocking solar heat gain is particularly important during the summer cooling season.

Visible Transmittance (VT) measures how much light comes through a product. VT is expressed as a number between 0 and 1. The higher the VT, the higher the potential for daylighting.

Air Leakage (AL) measures how much outside air comes into a home or building through a product. AL rates typically fall in a range between 0.1 and 0.3. The lower the AL, the better a product is at keeping air out. AL is an optional rating, and manufacturers can choose not to include it on their labels. This label displays AL in U.S. units. Labels on products sold in markets outside the United States may display AL in metric units.

Condensation Resistance measures how well a product resists the formation of condensation. Condensation Resistance is expressed as a number between 1 and 100. The higher the number, the better a product is able to resist condensation. Condensation Resistance is an optional rating, and manufacturers can choose not to include it on their NFRC labels.



NFRC administers an independent, uniform rating and labeling system for the energy performance of fenestration products, including windows, curtain walls, doors, and skylights.

For more information on NFRC, please visit our Website at www.nfrc.org or contact NFRC directly at 301.589.1776.