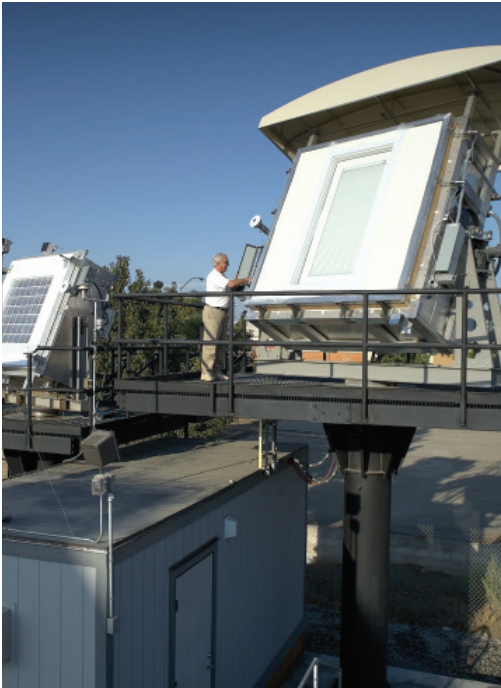




Solar Heat Gain Testing



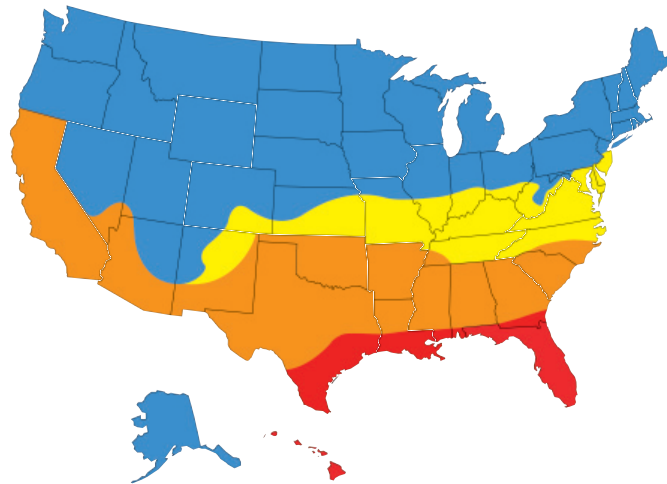
Solar Calorimeter Fast Facts

- Located in ATI's Fresno, California, facility.
- Spans 7ft x 7ft, large enough to hold materials from 1 sq ft. to 50 sq. ft, including assembled doors and windows.
- Fast stabilization for quicker test results.
- Only SHG-measurement technology accredited by the NFRC/DOE.
- Enables benchmark comparisons to simplify decision-making about energy-efficient materials.
- Provides actual SHG that is more relevant to determining heat loads and cooling load requirements than book or simulated values.

Value

When designing energy-efficient buildings, it's necessary to know the solar heat gain coefficient of the materials used on the structure's exterior.

The Solar Heat Gain Coefficient (SHGC) is the measurement of a material's ability to block radiant heat from the sun. Knowing the SHGC makes it possible to design and select materials that reduce the building's total heat load.

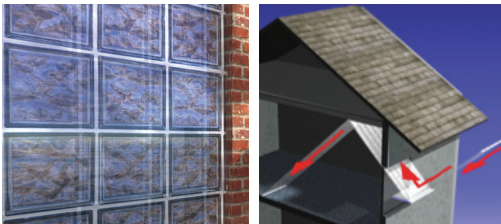


For products marketed in the central and southern states, the Department of Energy (DOE) requires an NFRC-certified Solar Heat Gain Coefficient (SHGC) label. State codes beyond these regions are adopting NFRC-certification.

Solar heat gain is a factor for exterior materials such as:

- Glass and plastic blocks
- Patterned glazing
- Skylights
- Sunshades
- Roof structures
- Tubular daylighting devices
- Solar screens
- Electrochromic and photochromic glazings
- Translucent or solar-absorbent product
- Much, much more...

Solar Heat Gain Testing



Typical testing methods:

ATI 0101
NFRC 200
NFRC 201
...

Innovations

While the benefits of determining SHG are well known, the technology to test for it was, until recently, questionable. But in 2004, ATI created a solar calorimeter.

To effectively measure the SHGC, the testing device must hold material in a chamber that tracks the sun in the horizontal azimuth and vertical altitude, in conjunction with test equipment that accounts for any conduction or convection heat loss or gain. The ATI team created and successfully applied this unique device, which was previously thought impossible to build.

Insights and Possibilities

As an NFRC-licensed Independent Certification and Inspection Agency, ATI can:

- Certify performance.
- Review all simulation and test information.
- Conduct in-plant inspections.
- Provide oversight for the manufacturer's in-house quality control program.

Technical Information				
Res	U-Value	SHGC	Visible Transmittance	U-Value
As-Fabricated	.32	.45	58	U-Value
Non-Res	.31	.45	.60	.3

ENERGY Performance

• Energy savings will depend on your specific climate, house and lifestyle
• For more information, call (manufacturer's phone number) or visit NFRC's web site at www.nfrc.org

Manufacturer attests that these ratings conform to applicable NFRC procedures for determining whole-product energy performance. NFRC ratings are determined for a fixed set of environmental conditions and specific product sizes.

ATI's performance testing ensures that:

- Rated products perform the same as tested product samples.
- Proper product ratings and labels are affixed on the correct product.
- Quality assurance programs accurately support claimed energy-performance ratings.



For more information on the value we can bring to your next project, visit www.archtest.com

The POWER In Performance Testing

