

Performance Information

U-Factor, Solar Heat Gain Coefficient (SHGC), and Visible Light Transmittance (VLT) are certified by the National Fenestration Rating Council (NFRC). 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 products and does not warrant the suitability of any product for any specific use.

Design Pressure (DP), Performance Class, and Performance Grade (PG) are certified by a third party organization, in many cases the Window and Door Manufacturers Association (WDMA). The certification requires the performance of at least one product of the product line to be tested in accordance with the applicable performance standards and verified by an independent party. The certification indicates that the product(s) of the product line passed the applicable tests. The certification does not apply to mulled and/or product combinations unless noted. Actual product results will vary and change over the product's life.

Definitions:

U-Factor: A rating based on how much heat is allowed to transfer through the product. The NFRC website states U-factor ratings for fenestration products generally fall between 0.15 and 1.20. The lower the U-factor, the less heat transfer occurs through a product. U-factor is particularly important during the winter heating season in colder climates. For more information see <http://www.nfrc.org/windowratings/Energy-ratings.html>.

Solar Heat Gain Coefficient (SHGC): A rating based on how much heat from the sun is blocked. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the more a product is blocking solar heat gain. Blocking solar heat gain is particularly important during the summer cooling season in hot Southern climates. By contrast, people in Northern climates may want solar heat gain during the cold winter months to lessen the cost of heating the home. For more information see <http://www.nfrc.org/windowratings/Energy-ratings.html>.

Visible Light Transmission (VLT): A rating based on how much visible 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. For more information see <http://www.nfrc.org/windowratings/Energy-ratings.html>.

Performance Grade (PG): A rating based on at least one product of the product line passing the applicable performance tests for the product type. The performance tests include testing for structural performance, air infiltration resistance, water penetration resistance, resistance to forced entry (if applicable), operating force (if applicable), and may include other auxiliary (durability) tests based on the specific product type and performance class. For more information see <http://www.wdma.com/> or <http://www.aamanet.org/> or <http://www.namicertification.com/>.

Design Pressure (DP): A rating that identifies the load, induced by wind and/or static snow, that a product is rated to withstand in its end-use application. For more information see <http://www.wdma.com/> or <http://www.aamanet.org/> or <http://www.namicertification.com/>.

Note: Design pressure (DP) is not to be confused with Performance Grade (PG) or structural test pressure (STP). Loads induced by static snow are applicable only to TDDs, roof windows, and unit skylights.

Performance Class: Four performance classes (R, LC, CW, and AW) exist in the AAMA/WDMA/CSA 101/I.S.2/A440-11 standard. According to AAMA, the following classes are commonly used in the following dwellings (Note: product selection is based on the performance requirements of the particular project):

- R class - commonly used in one- and two-family dwellings.
- LC class - commonly used for low- and mid-rise multifamily dwellings and other buildings where larger sizes and higher loading requirements are expected.
- CW class - commonly used in low- and mid-rise buildings where larger sizes, higher loading requirements, limits on deflection and heavier use are expected.
- AW class - commonly used in high-rise and mid-rise buildings to meet increased loading requirements and limits on deflection and in buildings where frequent and extreme use of the fenestration products is expected.

For more information see <http://www.wdma.com/> or <http://www.aamanet.org/> or <http://www.namicertification.com/>.

FPAS: FPAS stands for Florida Product Approval System. For more information visit https://www.floridabuilding.org/pr/pr_app_srch.aspx

TDI: TDI stands for Texas Department of Insurance. For more information visit <http://www.tdi.texas.gov/>

Useful links:

National Fenestration Rating Council (NFRC) - <http://www.nfrc.org/>

Window & Door Manufacturers Association (WDMA) - <http://www.wdma.com/>

National Accreditation & Management Institute, Inc. (NAMI) - <http://www.namicertification.com/>

American Architectural Manufacturers Association (AAMA) - <http://www.aamanet.org/>

Florida Product Approval System - https://www.floridabuilding.org/pr/pr_default.aspx

Texas Department of Insurance - <http://www.tdi.texas.gov/>