

# Imperial Door With QMAX Thermally Enhanced Core

## Frequently Asked Questions

### Q. What is the Imperial with QMAX Thermally Enhanced Core?

A. QMAX is a new thermally enhanced core for flush Imperial series doors. The Imperial with QMAX core has significantly improved thermal performance and sustainable characteristics over polystyrene or polyurethane foam cores.

### Q. What are the main thermal advantages of the Imperial with QMAX Thermally Enhanced Core?

A. Imperial with QMAX Core contributes to a U-value as low as 0.32 which is 25% better thermal performance than the previous core and provides air leakage performance rates that meet or exceeds ASHRAE 189.1, ASHRAE 90.1, and NFRC standards when tested per ASTM E283.

### Q. What are U and R values or factors?

A. R-value is how well a material insulates. The higher the R-value, the better the insulation and the more energy you will save. U-value measures how well materials conduct heat. It is essentially the inverse of the R-value. The U-value measures the rate at which heat transfers through a material over a given area under standardized conditions.

### Q. What is ASHRAE 189.1 and 90.1 standards?

A. Standard 189.1 provides total building sustainability guidance for designing, building, and operating high-performance green buildings. ASHRAE 90.1 (Energy Standard for Buildings Except Low-Rise Residential Buildings) is a US standard that provides minimum requirements for energy efficient designs for buildings except for low-rise residential buildings.

### Q. What is NFRC?

A. NFRC stands for National Fenestration Rating Council. NFRC was created to provide standardized methods for determining the windows, doors and skylight energy performance. NFRC is not a trade association but a non-profit public/private organization representing broad industry interest. NFRC standards are referenced in ASHRAE 90.1. ASSA ABLOY Door Group does not emboss or label their doors or frames with this performance requirement but has Intertek/ATI test reports to document product energy efficiency performance and compliance.

### Q. What are the requirements of SDI-113 standard?

A. Imperial with QMAX Thermally Enhanced Core thermal testing complies SDI-113 Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door & Frame Assemblies per ASTM C1363, Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus, ASTM C1199, Standard Test Method for Measuring the Steady-State Thermal Transmittance of Fenestration Systems Using Hot Box Methods and ASTM E1423 Practice for Determining Steady State Thermal Transmittance of Fenestration Systems.

### Q. What is the energy and air infiltration performance of Imperial with QMAX Thermally Enhanced Core?

A. U-Factor of 0.32/R-Value of 3.10 with the Mercury 3 Thermally broken Frame and U-Factor of 0.37/R-Value of 2.68 in a masonry frame when thermally tested per SDI-113/ASTM C1199 and Air infiltration of 0.1 cfm/ft<sup>2</sup> per ASTM E283 testing.

### Q. What are the available opening sizes?

A. Up to 5'0" x 10'0" singles and 10'0" x 10'0" pairs maximum size.

### Q. Can the Imperial with QMAX Thermally Enhanced Core be fire rated?

A. Yes up to 3 hours. Up to 4'0" x 8'0" singles and 8'0" x 8'0" pairs maximum size.

### Q. How do you order the Imperial with QMAX Thermally Enhanced Core?

A. IQ Series for handed and VQ Series for non-handed doors.

### Q. Can the Imperial with QMAX Thermally Enhanced Core be used in Windstorm assemblies?

A. Yes up to 150 psf 4'0" x 8'0" singles and 8'0" x 8'0" pairs maximum size.

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