



GUARDIAN 275® DATA SHEET

Information for 1" Panels

TEST DESCRIPTION

TEST METHOD

RESULTS & COMMENTS

FLAMMABILITY

Flame Spread/Smoke Development

Interior Sheet	ASTM E-84 UL 723, ANSI/NFPA #255	Flame Spread: 10 Smoke Development: 300
Class "A" Exterior Sheet	UL 723 ASTM E-84, ANSI/NFPA #255	Flame Spread: 15 Smoke Development: 350
Insulation	ASTM E-84 UL 723, ANSI/NFPA #255	Flame Spread: 5 Smoke Development: 0
2018 INTERNATIONAL BLDG. CODE REQUIREMENTS	Section 2606.4 Section 2606.4	Flame Spread: No Requirement Smoke Development: <450

Burn Extent

Interior Sheet	ASTM D-635	CC1 - less than 1.0 inch
Ultimate Series™ Exterior Sheet	ASTM D-635	CC2 - less than 2.5 inch/min
2018 INTERNATIONAL BLDG. CODE REQUIREMENTS	Section 2606.4	Material shall have a CC1 or CC2 classification

Self-Ignition

Interior Sheet	ASTM D-1929	Flash Ignition: 872°F (467°C) Spontaneous Ignition: 912°F (489°C)
Class "A" Exterior Sheet	ASTM D-1929	Flash Ignition: 925°F (496°C) Spontaneous Ignition: 937°F (503°C)
Ultimate Series™ Exterior Sheet	ASTM D-1929	Flash Ignition: 752°F (400°C) Spontaneous Ignition: 860°F (460°C)
2018 INTERNATIONAL BLDG. CODE REQUIREMENTS	Section 2606.4	Self-ignition temperature greater than 650°F

ADHESIVE BOND STRENGTH

Adhesive Bond Strength

Un-Aged	ASTM D-1002 (Shear)	563 psi
Aged	(by ASTM D-1037)	1212 psi
Un-Aged	ASTM C-297 (Tensile)	557 psi
Aged	(by ASTM D-1037)	914 psi

WEATHERING

Color Difference

Ultimate Series™ Exterior Sheet	ASTM D-2244	ΔE = 2.23 after 15 yrs
**Delta E readings on uncoated white samples exposed to fifteen years full spectrum solar radiation.		
**Accelerated per ASTM G90-05 - Standard Practice for Performing Accelerated Outdoor Weathering of Nonmetallic Materials Using Concentrated Natural Sunlight.		
**All FRP face sheets are specifically formulated for architectural use. The exterior face sheets are formulated with state-of-the-art ultraviolet stabilizers. An additional UV protective coating is molecularly bonded to the weathering surface of the exterior face sheet. This coating acts as an additional weather barrier to enhance the life expectancy of the product.		

Taber Abrasion Test

Ultimate Series™ Exterior Sheet (White)	ASTM D-4060	1000 cycles @ 500 grams = 32.5 mg wt. loss
Ultimate Series™ Exterior Sheet (Crystal)	ASTM D-4060	1000 cycles @ 500 grams = 32.5 mg wt. loss
**Taber Abrasion Test results are irrelevant when comparing the weathering of Fiberglass Reinforced Polymer (FRP) panels. The test was developed to measure the hardness of a material coating (i.e. paint / anodize), and the hardness of FRP resin or coatings applied to the FRP do not provide an accurate measure of the sheet's ability to withstand weathering (i.e. UV, heat, cold, and acid rain).		

GUARDIAN 275® LIGHT TRANSMISSION & THERMAL PERFORMANCE DATA - EXTERIOR / INTERIOR SHEET COLOR

	Crystal / Crystal	Crystal / White	White / White
Light Transmission¹ (%)			
No Insulation (%)	64	40	24
With Insulation (%)	45	30	18
Solar Heat Gain Coefficient			
No Insulation	0.56	0.45	0.33
With Insulation	0.43	0.38	0.30

¹Light Transmission values are based on an incident angle normal to the plane of a representative panel, and are determined using the ASTM E-912 standard.

Center of Panel U-factor

No Insulation - 0.58
With Insulation - 0.45

UV Transmittance - <0.01

Additional sheet colors available. Please contact Major Industries, Inc. for related performance data.

NOTE: All information is based on testing as reported by independent test agencies. Major Industries, Inc. strives to create the most advanced product in the daylighting industry. As a result, products, materials and test results are subject to change without notice. Values may also vary with custom system configurations. Please contact Major Industries, Inc. with any questions.

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