LAMINATORS
Composite Panel Solutions

www.LaminatorsInc.com
800.523.2347
3255 Penn St, Hatfield, PA 19440

INFERNOSHIELD™
Technical Data Sheet

PRODUCT: InfernoShield™

EFFECTIVE: March 29, 2023

Description: InfernoShield™ is a noncombustible insulated glazing panel that consists of a calcium silicate composition core bonded on both sides to a thermoplastic stabilizer with a texture/color finished sheet of aluminum on each face. Panels are intended for use in window, glazing, and curtain wall systems.

Properties:

Thickness	1 in (nom), standard
Weight	2.77 psf (+/-), standard
Core	Calcium Silicate Composition (based on xonotlite mineral) 18.0 pcf density
Stabilizers	Extruded Profile Polypropylene
Sheets (ASTM B209)	3003-H14/24; 3105-H14/24 & H26/28; 5005-H34 Aluminum 0.012 to 0.032 in
Texture Finish	Smooth or Stucco-Embossed
Color Finish (AAMA 2605)	PVDF/Kynar 500®, Polyester, or Anodized
Thermal Expansion	13.1×10^{-6} in/in/°F

Performance:

R-Value [1] (ASTM C518)	2.14 hr °F ft^2 / BTU
Fire-Resistance Ratings (IBC 703.2)	Not Tested
Noncombustible Material (IBC 703.5)	Meets Criteria for Acceptance
• Elementary materials (IBC 703.5.1)	(Core) Tested in Accordance with ASTM E136
• Composite materials (IBC 703.5.2)	(Panel) Tested in Accordance with ASTM E84
Fire Performance [2] (ASTM E84)	Class A Flame Spread Index (FSI) = 0 Smoke Developed Index (SDI) = 55

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Allowable Strength Design (ASD) Capacities (R_n / Ω): [3,4,5,6]

0.012 to 0.015 in Sheets

Panel Span (in) [7]	≤ 30	36	42	48	54	60
Wind Load (psf) [8]	60	58	43	32	26	20

0.027 to 0.032 in Sheets

Panel Span (in) [7]	≤ 42	48	54	60
Wind Load (psf) [8]	60	50	39	32

Notes:

1. R-Value for 1 in (nom) standard panel based on ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus performed by independent laboratory per ASHRAE 90.1-2010.
2. Surface-burning characteristics are applicable to exterior conditions only and are not applicable to interior conditions.
3. Based on testing performed in conjunction with ASTM E529 Standard Guide for Conducting Flexural Tests on Beams and Girders for Building Construction.
4. Capacities are calculated for a 1 in (nom) standard panel with Calcium Silicate Composition core, actual sheet thickness, and double-sided typical construction (matching sheet thickness on each face).
5. Capacities are governed by the Aluminum Design Manual (ADM).
6. Project-specific Components and Cladding wind loads are calculated per ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures. Wind loads (Required Strength, Ra) shall not exceed ASD Capacities (Allowable Strength, Rn / Ω) for given spans.
7. Panel Span applies to shortest dimension of finished panel.
8. Strength conditions govern for given capacities; therefore, International Building Code (IBC) deflection limits do not govern but have been met. Capacities are capped at values shown but are higher for spans less than indicated. Contact Laminators Technical Support if higher capacities are required.