

# THERMOLITE™ SE

## TECHNICAL DATA SHEET

**PRODUCT:** Thermolite SE  
**EFFECTIVE:** October 24, 2024

**Description:** Laminators Inc. Thermolite SE is an insulated glazing panel that consists of a fabricated Laminators Omega-Lite® aluminum composite material (ACM) panel bonded to the exterior face of a Thermolite™ panel to create stepped edges. Panels are intended for use in window, glazing, and curtain wall systems and are available in a range of thicknesses.

**Properties:**

Thickness	2 in (nom), standard (1 in stepped edge Omega-Lite + 1 in Thermolite)
Weight	2.52 psf (+/-), standard
Core	Expanded Polystyrene (EPS) 2.0 pcf nominal density (Type IX)
	Polyisocyanurate (ISO) 2.0 pcf density (Type I)
Stabilizer	Extruded Corrugated Polypropylene
Aluminum Sheet (ASTM B209-14)	3003-H14/24; 3105-H14/24 & H26/28; 5005-H34 0.012 to 0.032 in
Aluminum Stiffener (ASTM B221-12)	6063-T4
Texture Finish <sup>1</sup>	Smooth or Stucco-Embossed
Color Finish <sup>1</sup> (AAMA 2605-22)	PVDF/Kynar 500®, Polyester, or Anodized
Coefficient of Thermal Expansion, $\alpha$ (2015 ADM)	$13 \times 10^{-6}$ in/in/°F

**Go beyond the panel... and go to the next level!**

**Fire Performance:** <sup>2</sup>

Thermolite Panel (EPS) <sup>3</sup> (ASTM E84-23)	Class A Flame Spread Index (FSI) = 0 Smoke Developed Index (SDI) = 20
<ul style="list-style-type: none"> <li>• EPS Core <sup>4</sup> (2018 IBC / 2603.5.4)</li> </ul>	FSI ≤ 25 SDI ≤ 450
Thermolite Panel (ISO) <sup>3</sup> (ASTM E84-18)	Class A FSI = 15 SDI = 350
<ul style="list-style-type: none"> <li>• ISO Core <sup>5</sup> (2018 IBC / 2603.5.4)</li> </ul>	FSI = 20 SDI = 150
Omega-Lite Panel (ASTM E84-19b)	Class A FSI = 0 SDI = 20

**Thermal:** <sup>6</sup>

Core	Available Thickness (in)	R-Value (hr °F ft <sup>2</sup> / BTU)
EPS <sup>7,8</sup>	1-3/4	5.7
	2	6.8
	2-1/2	9.0
	3	11.2
	3-1/2	13.3
ISO <sup>9,10</sup>	1-3/4	6.3
	2	7.6
	2-1/2	10.3
	3	13.0
	3-1/2	15.7

**Available Load-Carrying Capacities ( $R_n / \Omega$ ):** <sup>11,12,13,14</sup>

Panel Span (in) <sup>15</sup>	≤ 30	36	42	48	54	60
Wind Load (psf) <sup>16</sup>	60	50	40	35	30	25

Notes:

1. Contact Laminators Sales/Customer Service team for availability.
2. Per International Building Code (IBC), panels shall be separated from the interior of a building with 1/2 in gypsum wallboard or other material tested in accordance with and meeting the acceptance criteria of NFPA 275.
3. Based on 1 in (nom), standard.
4. Based on third-party documentation provided by manufacturer:
  - a. UL Evaluation Report UL ER11783-01
  - b. Certificate of Compliance 20150510-R11783
  - c. UL Product iQ BRYX.R11056
5. Based on third-party documentation provided by manufacturer:
  - a. ASTM E84-12 Report 12-11177
  - b. Performance meets 2603.5.4; however, tested thickness exceeds maximum
6. Linear interpolation between values is permitted.
7. Based on:
  - a. 1 in stepped edge Omega-Lite and ASTM C518-10 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.
  - b. 1 in (nom), standard Thermolite and ASTM C518-21 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.
8. Calculated values for all other panel thicknesses based on Carpenter Company published R-Value for 2.0 pcf density (Type IX) EPS foam at 75°F.
9. Based on:
  - a. 1 in stepped edge Omega-Lite and ASTM C518-10 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.
  - b. 1 in (nom), standard Thermolite and ASTM C518-10 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.
10. Calculated values for all other panel thicknesses based on Elliot Company published aged R-Value for 2.0 pcf density (Type I) ISO foam.
11. Based on internal testing performed in conjunction with ASTM E529 Standard Guide for Conducting Flexural Tests on Beams and Girders for Building Construction.
12. Capacities calculated for a 2 in (nom), standard panel with EPS core, actual sheet thickness, and double-sided typical construction (matching sheet thickness on each face). For Single-Sided panels (i.e. non-matching sheet thickness), refer to the chart corresponding to the lesser sheet thickness for capacities. Contact Laminators Technical Support for capacities of panels less than 2 in.
13. Based on the Aluminum Design Manual (ADM).
14. Project-specific Components and Cladding wind loads (Required Strength,  $R_a$ ) shall not exceed Available Load-Carrying Capacities (Allowable Strength,  $R_n / \Omega$ ) for given spans. Wind loads are to be calculated per ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures.
15. Panel Span applies to shortest dimension of finished panel.
16. Strength conditions govern for given capacities; therefore, International Building Code (IBC) deflection limits have been met. Capacities capped at values shown but are higher for spans less than indicated. Contact Laminators Technical Support if higher capacities are required.