

THERMOLITE™ SE

Technical Data Sheet

PRODUCT: Thermolite™ SE
EFFECTIVE: January 24, 2020

Description: Thermolite™ SE is an insulated glazing panel that consists of a fabricated Laminators Omega-Lite® ACM panel bonded on the exterior face of a standard Thermolite™ panel to create stepped edges. Intended for use in window, glazing, and curtain wall systems, panels are available in thicknesses ranging from 1-3/4 to 3-1/2 in.

Properties:

Thickness	2 in (nom), standard (1 in Thermolite™ + 1 in stepped edge Omega-Lite®)	
Weight	2.39 psf (+/-), standard	
Core	Expanded Polystyrene (EPS): 2.0 pcf density (Type IX)	Polyisocyanurate (ISO): 2.0 pcf density (Type I)
Stabilizers	Extruded Corrugated Polypropylene	
Sheets (ASTM B209)	3003-H14/24, 3105-H14/24 & H26/28, 5005-H34 Aluminum 0.0125 to 0.032 in	
Texture Finish	Smooth (exterior), Smooth or Stucco-Embossed (interior)	
Color Finish (AAMA 2605)	PVDF/Kynar 500® or Anodized	
Thermal Expansion	13.1x10 ⁻⁶ in/in/°F	

R-Values:

	EPS Core			ISO Core	
	Thickness (in)	R-Value (hr °F ft ² / BTU)		Thickness (in)	R-Value (hr °F ft ² / BTU)
	1-3/4	6.0 [†]		1-3/4	6.3 [‡]
	2	7.0 [*]		2	7.6 [*]
	2-1/2	9.2 [†]		2-1/2	10.3 [‡]
	3	11.4 [†]		3	13.0 [‡]
	3-1/2	13.6 [†]		3-1/2	15.7 [‡]

Notes:

- * R-Values for 1 in Thermolite™ and Omega-Lite® portions of 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.
- † Calculated value based on Carpenter Company published R-Value for 2.0 pcf density (Type IX) EPS foam at 75°F.
- ‡ Calculated value based on Elliot Company published aged R-Value for 2.0 pcf density (Type I) ISO foam.

- Linear interpolation between values is permitted.

Performance:

Fire Performance (ASTM E84)	Class A (2 in w/ EPS) Flame Spread Index (FSI) = 0 Smoke Developed Index (SDI) = 100	Class A (1 in w/ ISO) Flame Spread Index (FSI) = 15 Smoke Developed Index (SDI) = 350
Fire Performance (Omega-Lite®) (ASTM E84)	Class A Flame Spread Index (FSI) = 15 Smoke Developed Index (SDI) = 90	

Notes:

- Surface-burning characteristics are applicable to exterior conditions only and are not applicable to interior conditions.
- 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.

Available Load-Carrying Capacities (R_n / Ω):

Panel Span (in)	12	18	24	30	36	42	48	54	60
Wind Load (psf)	120*	120*	85	60	50	40	35	30	25

Notes:

- Capacities are calculated for a 2 in (nom), standard panel with EPS core and 0.0125 in sheet thickness backer. Contact Laminators Technical Support for capacities of panels less than 2 in.
- Panel Span applies to shortest dimension of finished panel.
- Capacities are governed by the 2010 Aluminum Design Manual (ADM) using a minimum Factor of Safety = 1.65 for yield strength.
- Strength conditions govern for given capacities; therefore, 2015 International Building Code (IBC) deflection limits have been met. Capacities noted * are capped at 120 psf.
- Project-specific Components and Cladding wind loads (Required Strength, R_a) shall not exceed Available Load-Carrying Capacities (Allowable Strength, R_n / Ω) for given spans. Wind loads are to be calculated per ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures.
- Testing was performed in conjunction with ASTM E529 Standard Guide for Conducting Flexural Tests on Beams and Girders for Building Construction.