

## TAPERED INSULATION

### ROOF APPLICATIONS

Insulation is a vital component of a building's envelope. For building designers requiring the highest quality rigid insulation, ThermalStar® Tapered Insulation provides unmatched quality, with a stable long term R-value that will last the lifetime of your structure.

Manufactured under an industry leading quality control program monitored by UL and ICC-ES, ThermalStar Tapered Insulation meets or exceeds ASTM C578 standards, providing an HFC free, recyclable rigid insulation with a low Global Warming Potential (GWP).

### PHYSICAL PROPERTIES

PROPERTY	ASTM TEST METHOD	TAPERED INSULATION					
		10	13	15	25	40	60
Compressive Strength (psi) at 10% Deformation <sup>1</sup>	D1621	10	13	15	25	40	60
ASTM Classification	C578	Type I	Type VIII	Type II	Type IX	Type XIV	Type XV
R-value per inch at 75°F Mean Temperature	C518	3.9	3.9	4.2	4.4	4.4	4.5
R-value per inch at 40°F Mean Temperature	C518	4.2	4.3	4.6	4.8	4.8	4.9
R-value per inch at 25°F Mean Temperature	C518	4.4	4.5	4.8	5.0	5.0	5.1
Flexural Strength (psi)	C203	25	30	35	50	60	75
Water Absorption (% by volume) 24 Hour Immersion	C272	3.0	2.0	2.0	1.0	1.0	1.0
		24 Hour Immersion & 24 Hours @ 50% RH	0.3	0.3	0.3	0.3	0.3
Water Vapor Permeance at 1" Thick (perms)	E96	5.0	3.5	3.5	2.5	2.5	2.5
Surface Burning - Flame Spread	E84	<25	<25	<25	<25	<25	<25
Surface Burning - Smoke Developed	E84	<450	<450	<450	<450	<450	<450
Maximum Use Temperature	-	Short Term (10-15 minutes) 180°F, Long Term 165°F					

<sup>1</sup> ThermalStar Tapered Insulation is elastic up to 1% deformation. A safety factor of 3 is recommended for long term loads to minimize long term deflection.

# CODE COMPLIANCE

ThermalStar Tapered Insulation complies with the model building codes when properly installed, as found in the following code reports and classification listings:

- ASTM C578 – (See product marking for type)
  - Physical Properties – UL QORW.R16529
  - Surface Burning – UL BRYX.R16529
  - CAN/ULC-S102.2, S701 – ULC BOZCC.R16529
- International Energy Conservation Code (IECC) – ICC-ES ESR-1962, UL ER16529-01
  - International Residential Code (IRC) – ICC-ES ESR-1962, UL ER16529-01
  - International Building Code (IBC) – ICC-ES ESR-1962, UL ER16529-01
  - NFPA 285 Approved Assemblies - UL ER16529-01

# WARRANTY

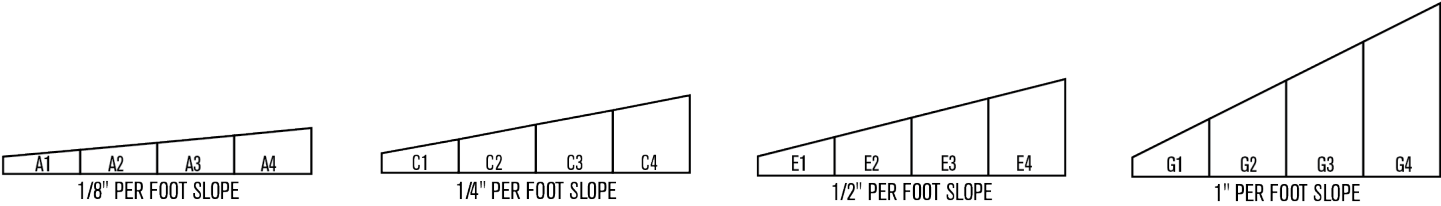
ThermalStar Tapered Insulation is backed by a limited lifetime warranty for physical and thermal performance. See separate ThermalStar warranty for terms and conditions.

# STANDARD PRODUCT OFFERINGS

Atlas has a dedicated tapered department to help meet the design and specification needs of your project. ThermalStar Tapered Insulation is offered in a one-layer, integral system or modular approach.

COMPRESSIVE STRENGTH	10 psi, 13 psi, 15 psi, 25 psi, 40 psi, 60 psi
SIZE	4'x4' and 4'x8' panels
THICKNESS	1/2" to 24" in a single layer

# EXAMPLE TAPERED CROSS-SECTIONS



FOR ADDITIONAL RESOURCES, VISIT THE ROOF INSULATION SECTION OF OUR WEBSITE [ATLASMOLDEDPRODUCTS.COM](https://atlasroofing.com)



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