

FLUTE FILL

COMMERCIAL ROOF APPLICATIONS

Insulation is a vital component of a building's envelope. For building designers requiring the highest quality rigid insulation, ThermalStar® Flute Fill 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 Flute Fill exceeds ASTM C578 standards, providing an HFC free, recyclable rigid insulation with a low Global Warming Potential (GWP).

PHYSICAL PROPERTIES

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

¹ ThermalStar Flute Fill 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 Flute Fill 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
 - Roof Assembly Approvals - UL TGFU.R16529, UL TGKX.666

WARRANTY

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

PRODUCT OFFERINGS

COMPRESSIVE STRENGTH	10 psi, 13 psi, 15 psi
SIZE	8' lengths
THICKNESS	1/2" to 4"
PROFILE	Precisely CNC cut to fit roof profile. Available with tapered, square, beveled or profile cut edges

FOR ADDITIONAL RESOURCES, VISIT THE ROOF INSULATION SECTION OF OUR WEBSITE [ATLASMOLDEDPRODUCTS.COM](#)



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