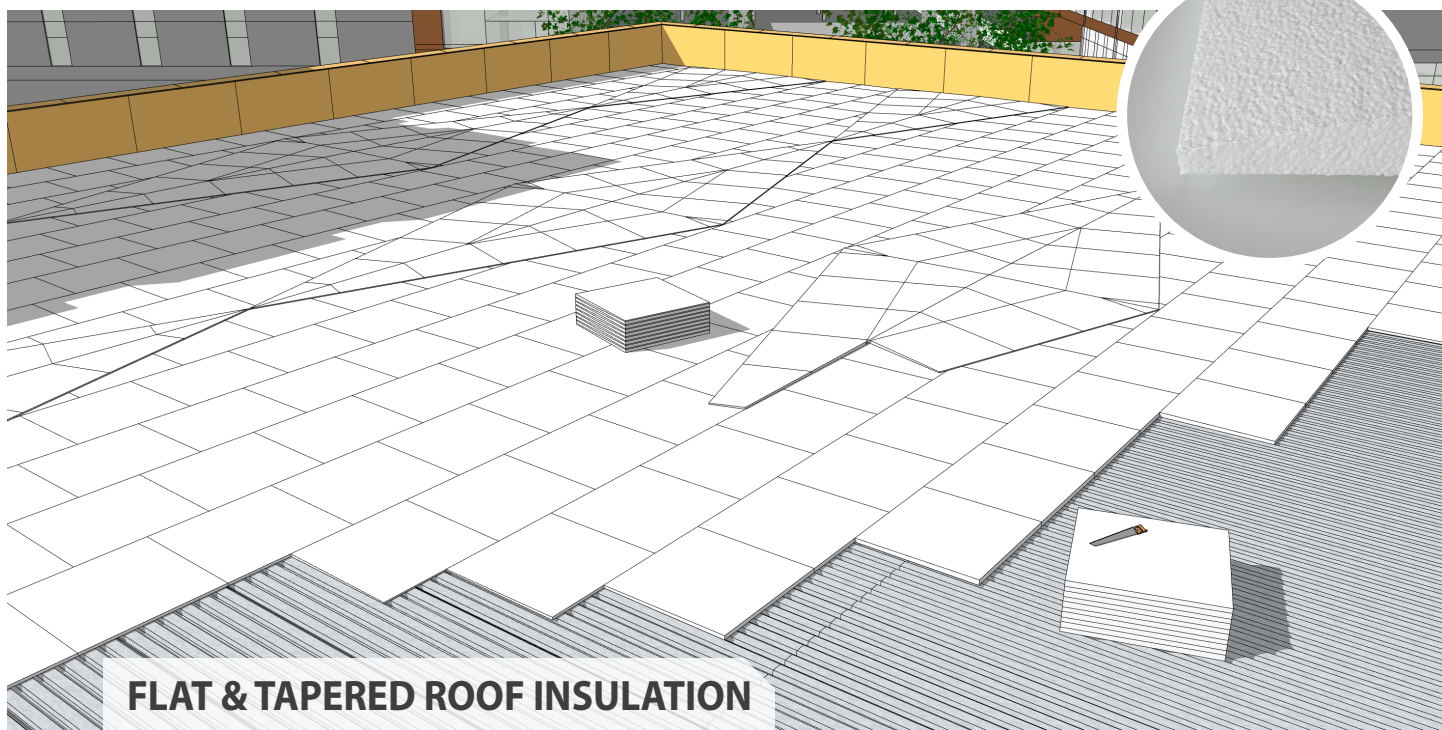


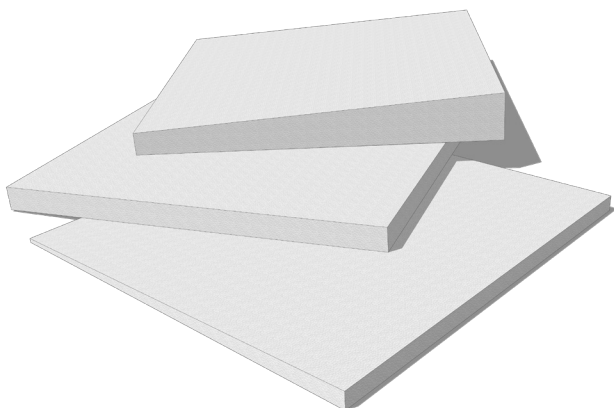
# Flat & Tapered Roofing Insulation



## FLAT & TAPERED ROOF INSULATION

Alleguard's flat and tapered roof insulation uses closed cell Expanded Polystyrene (EPS) offering cost effective performance. Slope and thickness of foam is custom manufactured for the specifics of each project for virtually limitless possibilities. Can be used in both new and retrofit applications for commercial, residential, institutional and industrial flat roofs.

Alleguard's flat and tapered roof insulation has exceptionally low, long term, in-service water absorption properties allowing it to maintain its specified thermal performance and durability.



## Alleguard Advantage

- Stable long term thermal resistance.
- Each panel is easy to handle due to the low weight, small size and can be easily cut.
- High design flexibility allows for more optimal sloping and drain placement to meet site specific conditions for more efficient drainage.
- Does not promote growth of mold and mildew.
- Flat and tapered insulation can be combined to create a hybrid tapered insulation system.
- **\*\*Alleguard provides flat and tapered roofing estimating services with detailed flat and tapered layouts for quantity takeoff. Contact your local Territory Manager for additional information.**

## Availability

Flat and tapered roof insulation is available in a wide range of slopes ranging from 1/2" (13mm) up to 48" (1219mm). Standard board dimensions are 4x4' (1.2x1.2m).

## Applications

- Flat roofs
- Low slope roofs
- Compatible adhered or ballasted systems
- Hybrid flat and tapered roof insulation solutions
- Compatible with single-ply or built-up roofs

The maximum continuous operating temperature for flat and tapered roof insulation is 158°F (70°C). EPS exposure to ultra violet (UV) is limited to a thin layer causing slight discoloration and surface dusting. The material underneath remains unaffected maintaining its properties. Prolonged exposure may cause minimal reduction in thickness. To avoid adhesion issues, apply the product right after board installation or remove the UV affected material by brushing/rasping the surface to expose unaffected EPS (avoid hydrocarbons and petroleum based products).

## Warranty

Alleguard supports building owners, designers and contractors by offering a 20-year, limited thermal warranty on the flat and tapered roof insulation product line. This warranty is available to the building owner at the time the building is completed and is transferable to any subsequent owner during the 20-year period.

## Physical Properties Table

Standard		Units							
Flat (EN) Product Identity			EN12		EN16 (HD)	EN20 (HD)	EN25 (HD)	EN30 (HD)	EN40 (HD)
Tapered (TP) Product Identity			TP10	TP13	TP15 (HD)	TP20 (HD)	TP25 (HD)	TP30 (HD)	TP40 (HD)
Specification for Rigid Polystyrene Insulation	ASTM C578		Type I	Type VIII	Type II	Type II	Type IX	Type IX	Type XIV
	CAN/ULC-S701		Type 1	Type 1	Type 2	Type 2	Type 3	Type 3	Type 3
Thermal Resistance <sup>1</sup>	ASTM C518	F.ft².hr/Btu	3.9	3.9	4.0	4.2	4.3	4.4	4.4
	@ 75°F (24°C)	(m²K/W)	(0.69)	(0.69)	(0.70)	(0.74)	(0.76)	(0.77)	(0.77)
Compressive Strength	ASTM D1621	psi	10-12	13	15-16	20	25	30	40
	@ 10% Strain	(kPa)	(69-83)	(90)	(104-110)	(138)	(172)	(207)	(276)
Water Absorption (Max.)	ASTM D2842	%	4.0	3.0	3.0	3.0	2.0	2.0	2.0
Water Vapor Permeance (Max.) <sup>1</sup>	ASTM E96	US perms	5.00	3.50	3.50	3.50	2.27	2.27	2.27
		(ng/Pa.s.m²)	(287)	(200)	(200)	(200)	(130)	(130)	(130)
Flexural Strength (Min.)	ASTM C203	psi	25	30	35	35	50	50	60
		(kPa)	(173)	(208)	(242)	(242)	(345)	(345)	(414)
Dimensional Stability (Max.)	ASTM D2126	%	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Limiting Oxygen Index (Min.)	ASTM D2863	%	24	24	24	24	24	24	24
Density	ASTM D1622	lb/ft³	1.00	1.15	1.35	1.50	1.80	2.00	2.50
		(kg/m³)	(16)	(18)	(22)	(24)	(29)	(32)	(40)
Surface Burning Characteristics	ASTM E84 <sup>2</sup>								
	Flame Spread Index (FSI)		≤25	≤25	≤25	≤25	≤25	≤25	≤25
	Smoke Developed Index (SDI)		≤450	≤450	≤450	≤450	≤450	≤450	≤450
	CAN/ULC-S102 <sup>2</sup>								
	Flame Spread Index (FSI)		≤210	≤210	≤210	≤210	≤210	≤210	≤210
	Smoke Developed Index (SDI)		≥500	≥500	≥500	≥500	≥500	≥500	≥500
<sup>1</sup> Measurement per 1" (25mm) of thickness									
<sup>2</sup> For thicknesses up to 4" or 100mm									

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