

ThermalStar[®] X-Grade[™]—Typical Properties

Compressive Strength @10%	13	15	25
R-Value at 75F	4.20 / inch	4.20 / inch	4.20 / inch
Product Name	X-Grade [™] 13	X-Grade [™] 15	X-Grade [™] 25
Typical Applications	Utility XPS Sub Sheathing	Cavity XPS Sub Sheathing	Below Slab XPS Sub Sheathing
ASTM C578 Classification	Type VIII	Type II	Type IX
R-Value at 40F	4.35 / inch	4.6 / inch	4.7 / inch
R-Value at 25F	4.55 / inch	4.8 / inch	4.9 / inch
Compression @1% (D6817)	7 psi	8.8 psi	11.0 psi
Flexural Strength	35 psi	42 psi	55 psi
Tensile Strength	33 psi	40 psi	50 psi
Shear Strength	22 psi	26 psi	38 psi
K-Factor at 75F	0.240 / inch	0.240 / inch	0.240 / inch
Water Absorption	1.5 vol% max	1.5 vol% max	1.5 vol% max
Water Vapor	2.5 perm max	2.5 perm max	2.5 perm max
Surface Burning	US via E84 = Flame Spread 20, Smoke Developed 400 Canada via CAN/ULC S102.2 = Flame Spread 290, Smoke Developed > 500		
Mold Resistance	NO growth of mold as tested via ASTM G21, D3273 and C1338		
Freeze / Thaw Exposure	NO degradation of Thermal Resistance, Dimensional Stability or Strength after ASTM C1512 Moisture / Temperature Cycling Test for Insulation		
15-year Below Grade	NO degradation of Thermal Resistance, Dimensional Stability or Physical Strength after 15-year foundation exposure test.		

*The physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation. This data is offered as a service to our customers and is subject to change. All information can be confirmed by contacting the Atlas EPS Technical Department.

ThermalStar® X-Grade™—High Load

Compressive Strength @10%	40	60
R-Value at 75F	4.20 / inch	4.40 / inch
Product Name	X-Grade™ 40	X-Grade™ 60
Typical Applications	Below Slab XPS Substitute	Below Slab XPS Substitute
ASTM C578 Classification	Type XIV	Type XV
R-Value at 40F	4.7 / inch	4.7 / inch
R-Value at 25F	5.0 / inch	5.0 / inch
Compression @1% (D6817)	15.0	20.0
Flexural Strength	75 psi	95 psi
Tensile Strength	70 psi	90 psi
Shear Strength	45 psi	58 psi
K-Factor at 75F	0.240 / inch	0.227 / inch
Water Vapor	2.5 perm max	2.5 perm max
Water Absorption	1.5 vol% max	1.25 vol% max
Surface Burning	US via E84 = Flame Spread 5, Smoke Developed 170	
Mold Resistance	NO growth of mold as tested via ASTM G21, D3273, and C1338	
Freeze / Thaw Exposure	NO degradation of Thermal Resistance, Dimensional Stability or Strength after ASTM C1512 Moisture / Temperature Cycling Test for Insulation	
15-year Below Grade	NO degradation of Thermal Resistance, Dimensional Stability or Physical Strength after 15-year foundation exposure test.	

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MSDS available at www.AtlasEPS.com