



X-Grade®

Rigid Insulation

When expectations exceed ordinary, X-Grade® rigid insulation is the only choice.

It's the proven XPS replacement for both commercial and residential projects including:

- Below grade
- Foundations
- Freezers and cold storage

For more information, please visit our website at:
www.ThermalStar.com/Products/X-Grade



EPSX® TECHNOLOGY ADVANTAGE



Termite Resistant



Moisture Resistant



Stable R-value



Environmentally Friendly



Limited Lifetime Warranty

STANDARD

Property	ASTM Test Method	STANDARD			
		X-Grade 15	X-Grade 25	X-Grade 40	X-Grade 60
Compressive Strength (minimum psi) at 10% Deformation ¹	D1621	15	25	40	60
R-value per inch (minimum) at 75°F Mean Temperature	C518	4.2	4.2	4.2	4.4
ASTM Classification	C578	Type II	Type II	Type XIV	Type XV
R-value per inch (minimum) at 40°F Mean Temperature	C518	4.6	4.7	4.7	4.7
R-value per inch (minimum) at 25°F Mean Temperature	C518	4.8	4.9	5.0	5.0
Compressive Strength (minimum psi) at 1% Deformation ¹	D1621	9	10	15	20
Flexural Strength (minimum psi)	C203	42	50	75	95
Water Absorption Percent (%) by Volume, Maximum After 24 Hour Immersion	C272	1.5	1.25	1.25	1.0
Water Vapor Permeance at 1" Thick (perms)	Typical E96, desiccant method	2.5	2.5	2.5	2.5
Surface Burning - Flame Spread and Smoked Developed	E84	FS 20, SD 400 (meets code)			
Maximum Use Temperature	-	Short Term (10–15 minutes) 180°F, Long term 165°F			

¹ ThermalStar X-Grade is elastic within 1–2% deformation. To prevent long term creep, 3:1 design safety factors for static loads of the 10% deformation values are recommended, or use the tested 1% deformation values for design, whichever is greater.



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Advantages of X-Grade:

STABLE R-VALUE

While XPS products have a higher initial R-value, X-Grade's thermal properties do not degrade over time, allowing the R-value to remain the same over the life of the structure.

LONG TERM MOISTURE ABSORPTION:

X-Grade has the ability to dry much faster than XPS, allowing it to remain drier during conditions of repeated exposure to moisture.*

INTEGRATED TERMITICIDE:

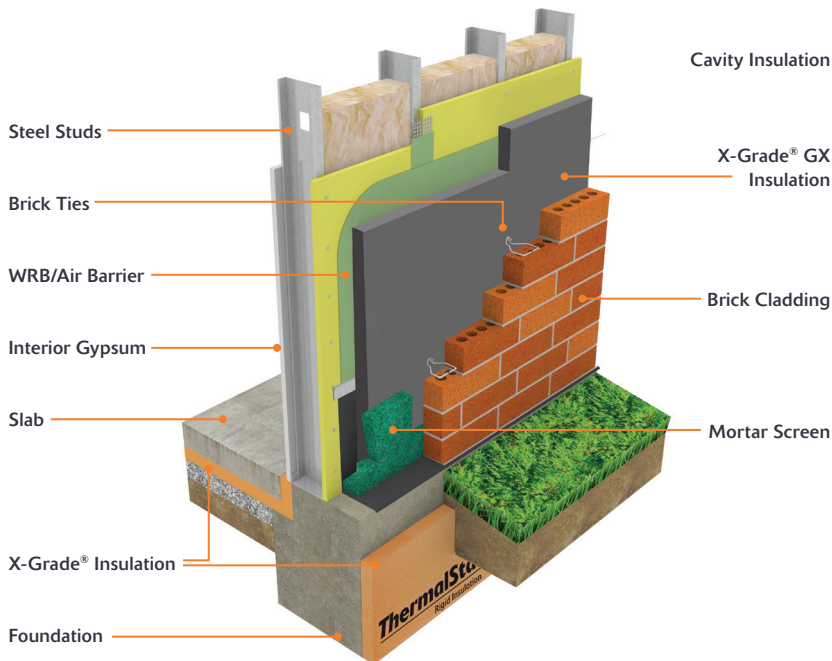
X-Grade has an integrated termiticide that is added during the manufacturing process, deterring termites below grade.

ENVIRONMENTALLY FRIENDLY:

XPS utilizes blowing agents in their insulating cells, and thus an extremely high global warming potential (GWP), whereas X-Grade cells simply contain air.**

RECYCLABLE:

X-Grade is readily accepted for recycle. Visit epspackaging.org to locate a drop-off location nearest you.



Specify ThermalStar X-Grade on Your Next Project!



*ORNL study of installed XPS below grade for 15 years resulted in accumulation of over 60% moisture by weight, and over 3 months to dry to initial conditions in the lab. "Measurement of Exterior Foundation Insulation to Assess Durability in Energy Saving Performance", April 2012, Oak Ridge National Laboratory.

**US EPA has mandated in July 2015 that XPS cease using high GWP gases by December 2020.

INSTALLATION AND HANDLING

X-Grade can be handled much the same as any other foam or wood sheathing, using similar tools or simple utility knives to customize panels to fit the application.

SAFETY

SDS for this product are available at atlaseps.com. Dust generated from sanding or cutting X-Grade should be avoided using a dust mask. X-Grade insulation is combustible and the product should be protected from ignition sources such as open flames or welder's torch. Applications not specifically listed in UL ER16529.1 require permanent separation of X-Grade insulation from the interior of the building by a thermal barrier such as drywall or concrete for fire safety.

WARRANTY

X-Grade Insulation is backed by a limited lifetime warranty for physical and thermal performance, and termite resistance.

CODE COMPLIANCE

ThermalStar X-Grade insulation complies with the model building codes when properly installed:

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

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