



# 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](http://www.ThermalStar.com/Products)

**EPSX® TECHNOLOGY ADVANTAGE**



Termite Resistant



Moisture Resistant



Stable R-value



Environmentally Friendly



Limited Lifetime Warranty

## STANDARD

Property	ASTM Test Method	X-Grade 15	X-Grade 25	X-Grade 40	X-Grade 60
Compressive Strength (minimum psi) at 10% Deformation <sup>1</sup>	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 <sup>1</sup>	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			

<sup>1</sup> 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 RESISTANCE:

The *coefficient of water absorption* is a property used to define a building material's likeliness to soak up water, with a sponge having a value of 1.0. In comparison, X-Grade has a coefficient of zero.

### INTEGRATED TERMITICIDE:

X-Grade has an integrated termiticide to prevent any termite damage or infestation.

### ENVIRONMENTALLY FRIENDLY:

XPS utilizes HCFC gases in its insulating cells to achieve an initial higher R-value and has an extremely high global warming potential (GWP) of 1430, whereas the insulating cells of X-Grade simply contain air, providing an environmentally friendly solution with a GWP of zero.

### RECYCLABLE:

X-Grade is readily accepted for recycle. Visit [epspackaging.org](http://epspackaging.org) to locate a drop-off location nearest you.

## 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 [AtlasMoldedProducts.com](http://AtlasMoldedProducts.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

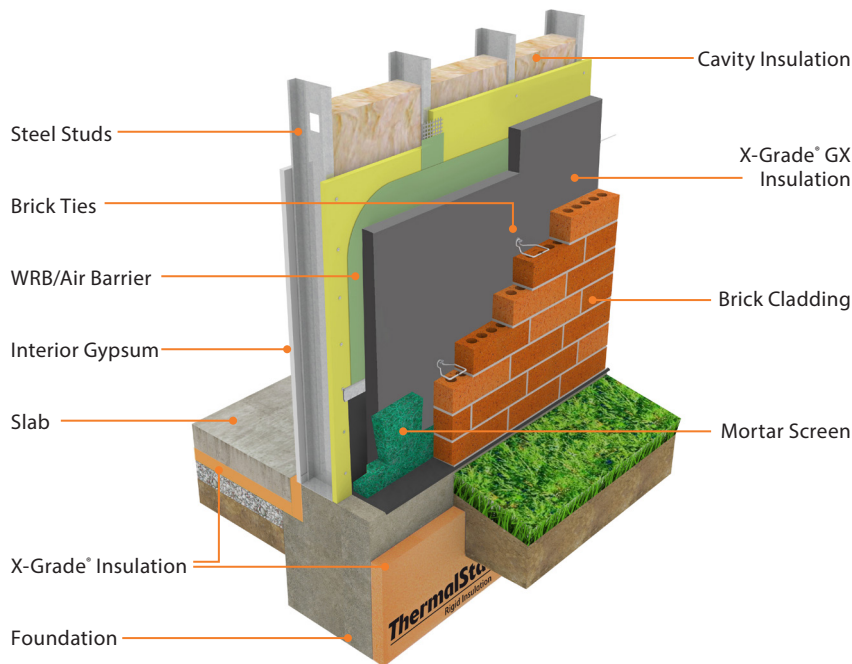
ThermalStar X-Grade insulation complies with the model building codes when properly installed:

- 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)

**ThermalStar**<sup>®</sup>  
Rigid Insulation

ThermalStar, the ThermalStar tag line, the color "Pale Creamy Orange," EPS<sup>®</sup>, and X-Grade are registered trademarks of Atlas Roofing Corporation

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Specify ThermalStar X-Grade on Your Next Project!

