



X-Grade[®]
Rigid Insulation

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

X-Grade GX is graphite enhanced expanded polystyrene (GPS), providing an insulating value of R5 in a nominal 1" thick panel. It is a proven XPS replacement for both commercial and residential projects including:

- Cavity wall insulation- NFPA 285 approved assemblies
- Below grade insulation
- Foundations
- Freezers and cold storage



EPS^X[®] TECHNOLOGY ADVANTAGE



Termite Resistant



Moisture Resistant



Stable R-value



Environmentally Friendly



Limited Lifetime Warranty

GX SERIES

Typical Tested Properties of R5 X-Grade GX	ASTM Test Method	X-Grade 10 GX ¹	X-Grade 15 GX	X-Grade 25 GX
Product R-value at 75°F Mean Temperature ²	C518	5.0	5.0	5.0
Product R-value at 40°F Mean Temperature ²	C518	5.2	5.2	5.3
Product R-value at 25°F Mean Temperature ²	C518	5.4	5.4	5.5
Compressive Strength (minimum psi) at 10% Deformation ³	D1621	10	15	25
ASTM Classification	C578	Type I	Type II	Type IX
Compressive Strength (minimum psi) at 1% Deformation ¹	D1621	4	9	11
Flexural Strength (minimum psi)	C203	25	42	55
Water Absorption Percent (%) by Volume, Maximum After 24 Hour Immersion	C272	1.1	1.1	1.1
Water Vapor Permeance at R5 thickness (perms)	Typical E96, desiccant method	4.0	3.1	2.5
Surface Burning - Flame Spread and Smoked Developed	E84	FS 5, SD 25 (meets code)		
Maximum Use Temperature	-	Short Term (10–15 minutes) 180°F, Long term 165°F		

¹ ThermalStar X-Grade 10 GX is not suitable for below grade applications, and is not manufactured with integrated termiticide

² All R5 ThermalStar X-Grade GX grades (10, 15, 25 psi) are manufactured at 1.06"

³ ThermalStar X-Grade GX 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.



ThermalStar[®]
BY ATLAS EPS

Advantages of X-Grade GX:

COST EFFECTIVE CAVITY WALL OPTION:

X-Grade GX provides equal thermal performance to XPS for non-load bearing applications, without the extra plastic. 10 psi X-Grade GX has 30% less material than the closest 15 psi XPS offering, providing the optimal solution.

STABLE R-VALUE:

While XPS products degrade from initial R5 as gases escape, the thermal performance of X-Grade GX is stable over time, assuring R-value meets design requirements over the life of the structure.

LONG TERM MOISTURE ABSORPTION:

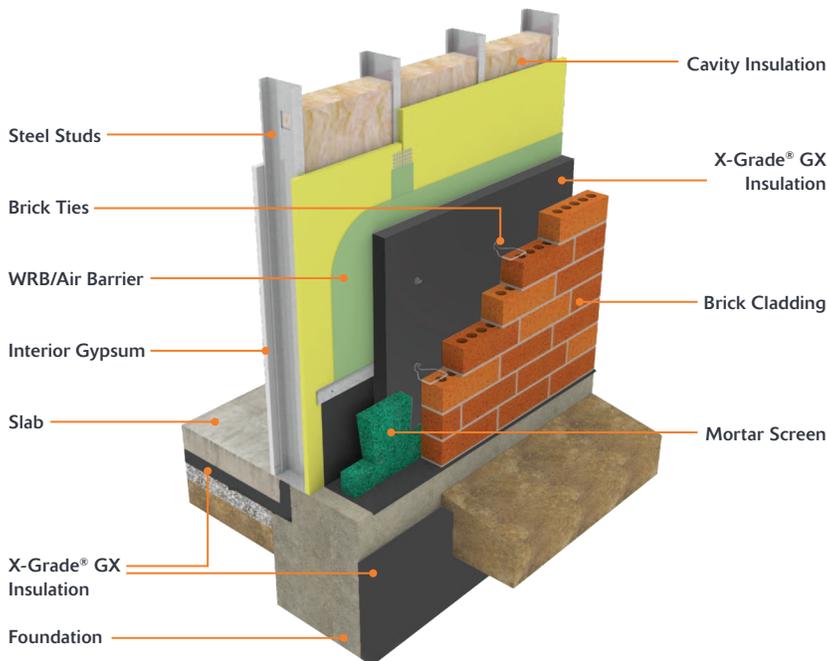
X-Grade GX has the ability to dry much faster than XPS, allowing it to remain drier during conditions of repeated exposure to moisture.*

INTEGRATED TERMITICIDE:

X-Grade GX for below grade has termiticide and a wax matrix that is integrated during the manufacturing process.

ENVIRONMENTALLY FRIENDLY:

XPS has HCFC gases in its insulating cells, and thus an extremely high global warming potential (GWP), whereas X-Grade GX cells simply contain air.**



Specify ThermalStar X-Grade GX 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 gasses by December 2020.

INSTALLATION AND HANDLING

X-Grade GX can be handled much the same as any other foam or wood sheathing, using similar tools or a simple utility knife to customize panels to fit the application. This product must be protected from direct sunlight during storage with an opaque covering.

SAFETY

SDS for this product are available at atlaseps.com. Dust generated from sanding or cutting X-Grade GX should be avoided using a dust mask. X-Grade GX 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 GX insulation from the interior of the building by a thermal barrier such as drywall or concrete for fire safety.

WARRANTY

X-Grade GX insulation is backed by a limited lifetime warranty for physical and thermal performance, and termite resistance on select products.

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, ULEX.R16529-01
- International Building Code (IBC) – ICC-ES ESR-1962, ULEX.R16529-01
- ASTM C578 – (See product marking for type)
- NFPA285 Approved – ULEX R16529-1

ThermalStar[®]
BY ATLAS EPS

ThermalStar, the ThermalStar tag line, the color "Pale Creamy Orange," EPS[®], and X-Grade are registered trademarks of Atlas Roofing Corporation



Atlas EPS, a Division of Atlas Roofing Corporation
8240 Byron Center Ave SW, Byron Center, MI 49315
800.917.9138, AtlasEPS.com