

Roof | Wall | Below Grade Applications

Tech Data

ThermalStar® G is engineered with enhanced thermal performance from its graphite-infused core for high R-value applications. ThermalStar G is a graphite enhanced molded expanded polystyrene (GPS) that meets ASTM C578 and is manufactured under an industry-leading quality control program monitored by UL and ICC-ES. ThermalStar G has a stable lifetime high R-value, a range of available compressive strengths, and outstanding moisture resistance. A low Global Warming Potential (GWP), Zero Ozone Depletion (ODP), GreenGuard certification, and an Environmental Product Declaration (EPD) are all available to demonstrate our commitment to sustainability.



Property	ASTM Test Method	10	15	25
Compressive Strength (psi) at 10% Deformation ¹	D1621	10	15	25
ASTM Classification	C578	Type I	Type II	Type IX
R-value per inch at 75°F Mean Temperature (°F·ft ² ·h/Btu)	C518	4.7	4.7	4.7
R-value per inch at 40°F Mean Temperature (°F·ft ² ·h/Btu)	C518	5.0	5.0	5.0
R-value per inch at 25°F Mean Temperature (°F·ft ² ·h/Btu)	C518	5.1	5.1	5.2
Flexural Strength (psi)	C203	25	35	50
Water Absorption (% by volume) 24 Hour Immersion	C272	3.0	2.0	1.0
24 Hour Immersion & 24 Hours @ 50% RH		0.3	0.3	0.3
Water Vapor Permeance at 1" Thick (perms)	E96	5.0	3.5	2.5
Surface Burning - Flame Spread Index	E84	<25	<25	<25
Surface Burning - Smoke Developed Index	E84	<450	<450	<450
Maximum Use Temperature	-	Short Term (10-15 minutes) 180°F Long Term 165°F		

¹ThermalStar G is elastic up to 1% deformation. A safety factor of 3 is recommended for long term loads to minimize long term deflection.



Code Compliance

ThermalStar G is recognized for compliance with the following standards and code:

- **ASTM C578**
- **ASTM E84/UL723**
- **NFPA 285 Assemblies**
- **IBC** – International Building Code
- **IRC** – International Residential Code
- **IECC** – International Energy Code

See **UL Listings, UL ER16529-01, and ICC-ES ESR-1962.**

Warranty



**LIMITED LIFETIME
WARRANTY**

ThermalStar G is backed by a limited lifetime warranty for physical and thermal performance, in addition to termite resistance when applicable. See separate ThermalStar warranty for terms and conditions.

Enhancements Available

Depending on the needs of your project, ThermalStar G may be specified with integrated termite resistance in below grade applications for long term protection.

Resources



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GREATER AVAILABILITY**



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