



X-Grade[®]
Rigid Insulation

R10 Product Comparison Data



Designers can be confident the thermal properties do not degrade over time since X-Grade has a stable R-value that will last the life of the structure



Extremely environmentally friendly since the insulating cells simply contain air, leading to zero global warming potential



An incorporated wax matrix enhances the natural water resistance of the product, assuring it can withstand repeated exposure to moisture



Compared to competing rigid insulation products, X-Grade offers the highest vapor permeance, allowing the maximum drying potential



Available in 15, 25, 40 and 60 psi to customize a solution for your load bearing application, with no thermal compromise

STANDARD

Property & Test Method	Dow Styrofoam [®]	Owens Corning Foamular [®]	
Thermal Resistance ASTM C518			
Product R-value at 75°F Mean Temperature	R10	R10	R10
Compressive Strength, ASTM D1621 psi, min.	25 psi	25 psi	25 psi
Size	48 x 96	48 x 96	48 x 96 scored
Material	Polystyrene	Polystyrene	Polystyrene
Flexural Strength ASTM C203 psi, min. per ASTM C578	50	50	50
Water Absorption ASTM C272 % by volume, max.	0.3	0.1	1.25
Water Vapor Permeance, ASTM E96, at R10 thickness	0.7	0.5	1.5
Long-term Maximum Use Temp °F, max.	165°F	165°F	165°F
Water Affinity	Hydrophobic	Hydrophobic	Hydrophobic

Star[®]
Rigid Insulation





Property & Test Method	Dow Styrofoam [®]	Owens Corning Foamular [®]	
Preserved Against Termite Degradation per Code Requirements in SC, GA, FL, AL, MS, LA, TX & CA*	Not Available	Not Available	Standard
Gas Inside Insulating Cells (per SDS)	Tetrafluoroethane (HFC 134a)	Proprietary Blend (HFC 134a)	Air
GreenGuard Schools & Children	No	Certified	Tested = 0
Global Warming Potential (GWP)	1430	1430	0
Burning Characteristics			
ASTM E84 Flame Spread and Smoke Developed	<25**, <450***	<25**, <450***	<25**, <450***
NFPA 285 Approval—Cementitious Claddings	Yes	Yes	Yes
Warranties			
Thermal Warranty	50 Years	Limited Lifetime	Limited Lifetime
Physical Warranty	50 Years	Limited Lifetime	Limited Lifetime
Termite Resistance Warranty	None	None	Limited Lifetime
ASTM Product Alternates	IV	IV	II
Alternate 15 psi Compressive ASTM C578 Type	X	X	II

* IBC 2603.8, IRC R318.4 requires foam plastic below grade or under slab be protected from termite attack in very heavy infestation areas

** Code requires flame spread rating of 75 maximum

*** Code requires smoke development rating of 450 maximum

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