



INNOVATIONS FOR LIVING®

# DELIVERING INSULATION PERFORMANCE YOU CAN TRUST



Owens Corning World Headquarters

Owens Corning is a leader in delivering energy-saving products and services.

FOAMULAR® Insulation's R-value is based on real-time aging and the product is warranted to maintain 90 percent of its insulating value for 20 years. FOAMULAR® insulation has a combination of characteristics that yield very low water absorption and is available in a range of compressive strengths that accept loads up to their design limit with little deformation.

# TRUST

## REAL TIME R-VALUE

We test and report our FOAMULAR® insulation's R-value under real time conditions. Unlike other types of foam plastic insulation that use artificial means to accelerate and estimate aged R-value, FOAMULAR® insulation's R-value is based upon real-time 5-year aging.

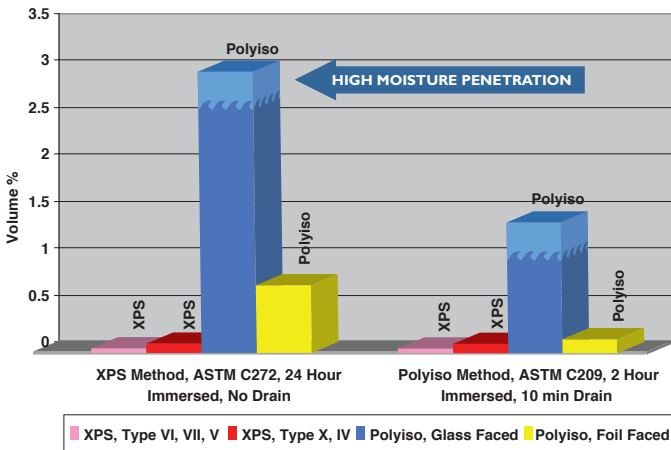


Why?

Because accelerated test methods can underestimate aged R-loss. We want to recognize the true aged performance of our insulation. Regardless its manufacturing process, all foam plastic insulations have a higher R-value when first manufactured, which drops for a period of time and then levels off over the life of the product.

The Polyiso industry uses a different method. Rather than use real-time aging to estimate R-value for 20 years it uses CAN/ULC/S770<sup>1</sup>, to artificially accelerate aging and estimate "thermal drift". The S770 method has been shown to underestimate aged R-loss<sup>2</sup>.

Unlike competing types of rigid insulation, FOAMULAR® insulation is warranted to maintain 90 percent of its R-value for 20 years with no caveats for exposure to moisture or facer delamination.



## MOISTURE PROTECTION

Water — an ever present element in building construction — gets in by design in applications like rain screen systems, or as a result of natural aging, design or construction flaws. Almost all construction applications, at some time, must resist water in the form of a liquid, a vapor or solid ice.



Not all insulations, however, provide adequate water resistance necessary to meet real world construction applications. Insulation that absorbs water loses R-value and other important physical properties resulting in costly customer complaints, call-backs and damaged reputations.

Significant differences in water absorption occur when different test methods are used to measure the same property. Compared with other types of foam insulation, FOAMULAR® insulation delivers the lowest water absorption via its moisture-resistant, uniform hydrophobic polymer cells with continuous walls.

### FOAMULAR® (XPS) Board Resists Moisture

Extruded Polystyrene (XPS) insulation is a closed cell, homogeneous board structure recognized for its proven durability and ability to resist moisture.

### EPS Board Can Absorb Moisture

Expanded Polystyrene (EPS) insulation allows water and air to penetrate its board structure through air spaces between beads, resulting in lower R-value, greater moisture penetration and less resistance to degradation from freeze/thaw cycles.

### ISO Board Can Allow Moisture Penetration

Polyisocyanurate (ISO) insulation – comprised of an irregular, brittle, open-cell structure with an inherent hydrophilic tendency – can allow water penetration.

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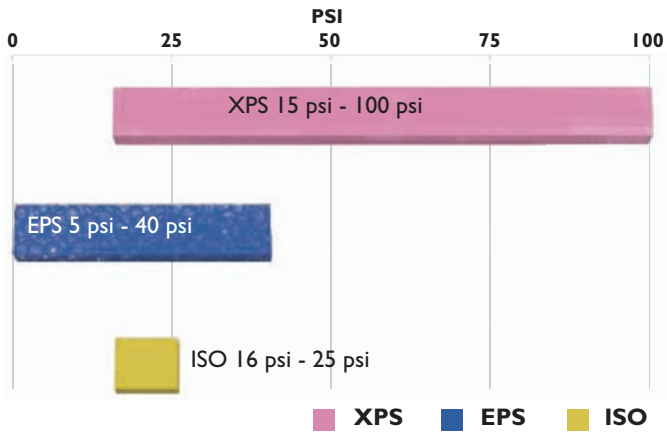
## COMPRESSIVE STRENGTH

The compressive strength of FOAMULAR® Insulation, which ranges from 15 psi to 100 psi, allows designers to select an appropriate strength that may not be available with other types of foam plastic insulation.

Manufactured to comply with ASTM C578 <sup>3</sup> FOAMULAR® insulation accepts its design load with little deformation and is available in a wide variety of strengths suitable for many applications.

Unlike brittle ISO products, which tend to fracture and crush at load limits, FOAMULAR® holds its strength.

### COMPRESSIVE STRENGTH COMPARISON CHART



## PERFORMANCE TOOLS

The commercial and residential building environment is changing. The design/build industry has a new set of drivers created as a result of:

- Escalating energy costs
- Growing evidence that energy efficient buildings are starting to command a premium price
- Changing energy codes which mandate energy efficient continuous insulation (ci)
- The demand for more sustainable products

At Owens Corning, not only do we warranty proven performance, we give you access to exclusive tools designed to differentiate specification/construction options, provide pay-back analysis and strengthen sustainable product recommendations.

Ask your Owens Corning representative about our:

- **Global Energy Master Tool:** An energy calculator that compares thermal performance and cost effectiveness of construction options providing users with energy savings, lifecycle cost savings and simple payback analysis.
- **Continuous Insulation AIA/CES Training**

## FOAMULAR® INSULATION PHYSICAL PROPERTIES

Properties	FOAMULAR® XPS INSULATION PRODUCTS					
	150	250	400	600	1000	High R CW Plus
R-value per in. (hr x ft <sup>2</sup> x °F / Btu)						
@ 75°F	5.0	5.0	5.0	5.0	5.0	5.6
@ 40°F	5.4	5.4	5.4	5.4	5.4	6.0
@ 25°F	5.6	5.6	5.6	5.6	5.6	6.2
Compressive, min. psi	15	25	40	60	100	25
Water Absorption, % vol.	0.10	0.10	0.05	0.05	0.05	0.10
ASTM C578 Type	X	IV	VI	VII	V	IV