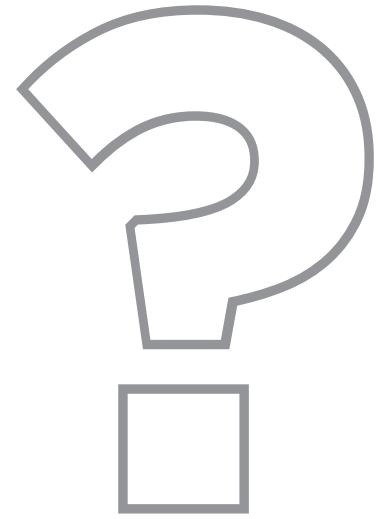




COMPARED TO POLYISO

# WHAT'S THE DIFFERENCE BETWEEN FOAM-CONTROL MAX<sup>®</sup> AND POLYISO INSULATION



**Foam-Control MAX<sup>®</sup> is a UL recognized insulation.**

There are marketplace misconceptions on the performance of Foam-Control MAX compared to Polyiso (polyisocyanurate) insulation.



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There are many myths about the performance of Foam-Control MAX compared to Polyiso insulation.  
- Consider these facts and make an educated decision -



### Closed Cell Polystyrene Foam Filled with Air.

Foam-Control MAX is a closed cell foam. It is manufactured from expanded polystyrene resin which is molded into blocks. Foam-Control MAX contains air within the closed cells.

### ASTM C578 Standard Compliance.

Foam-Control MAX is manufactured in compliance with ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation". Foam-Control MAX is recognized in UL evaluation report UL ER11812-05.



### R-value: Stable Long-Term.

The trapped gas in the cells of Foam-Control MAX is air. The air in Foam-Control MAX is in balance with the atmosphere during the life of the foam. The result is Foam-Control MAX has a stable R-value over its lifetime.

### R-value: Cold Temperature.

The R-value of Foam-Control MAX increases as temperatures drop. This means the Foam-Control MAX has improved performance in cold climates.

### Versatility.

Foam-Control MAX is manufactured in any thickness to meet project R-value requirements. Custom taper panels, flute filler, and one piece valleys readily available at low cost.

### Dimensional Stability.

Foam-Control MAX has exceptional dimensional stability when exposed to extreme temperature and moisture conditions.

### Vapor Permeance.

The vapor permeability of Foam-Control MAX ranges from 2.5 to 5.0 perms for a 1 in. thick material. Film faced Foam-Control MAX is available when low permeability is needed.

## POLYISO

### Closed Cell Polyisocyanurate Foam Filled with an Unknown Gas.

Polyiso insulation is a closed cell foam. It is manufactured from methylene diphenyl diisocyanate (MDI), polyester-derived polyol, blowing agents, and other additives. Polyiso insulation contain gases other than air within the closed cells.

### ASTM C1289 Standard Compliance.

Polyiso is manufactured in compliance with ASTM C1289, "Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board". There is limited recognition of Polyiso in evaluation reports.

### R-value: Loses R-value over Time.

The trapped gases in the cells of Polyiso assist to provide an initial high R-value. During the life of the Polyiso, air from the atmosphere diffuses in and the trapped gases diffuse out. The result is Polyiso loses R-value over its lifetime.

### R-value: Cold Temperature.

The R-value of Polyiso has been shown to drop significantly as temperatures drop. This means the performance of Polyiso is well below the claimed performance in cold climates.

### Versatility.

Polyiso is manufactured in limited thicknesses. Tapered panels have limited availability at high cost. Custom flute filler and one piece valleys not available.

### Dimensional Stability.

Shrinkage, curling, and cupping have been observed for Polyiso exposed to extreme temperature and moisture.

### Vapor Permeance.

The vapor permeability of Polyiso generally ranges from 1.5 to 4.0 perms for a 1 in. thick material. Aluminum faced Polyiso is available when low permeability is needed.



is a Great Value.

When purchasing insulation materials, the cost per R-value and strength are critical benchmarks. Foam-Control MAX is available with compressive strengths of 10, 15, and 25 psi. Foam-Control MAX insulation provides more thermal resistance (R-value) per dollar than Polyiso.

**POLYISO** is Expensive.

Products with compressive strengths of 16 to 25 psi are most common. Although Polyiso has a slightly higher R-value, the cost per R-value is much higher making Polyiso a more expensive insulation. In addition, the R-value is not stable for the life of the product.

## Foam-Control MAX Provides a Permanent Lifetime R-value.

The 5 year and 50 year R-values for Foam-Control MAX are the same as the initial R-value since the gas trapped in the cells of Foam-Control MAX is atmospheric air. Unlike Polyiso, Foam-Control MAX does not lose R-value over time.

Insulation	Initial R-value	5 year R-value	50 year R-value	Cost
150	5.0 <sup>1</sup>	5.0 <sup>1</sup>	5.0 <sup>1</sup>	\$
250	5.0 <sup>1</sup>	5.0 <sup>1</sup>	5.0 <sup>1</sup>	\$\$
<b>Polyiso</b>	approximately 7.2	5.6 <sup>2</sup>	4.5 <sup>3</sup>	\$\$\$

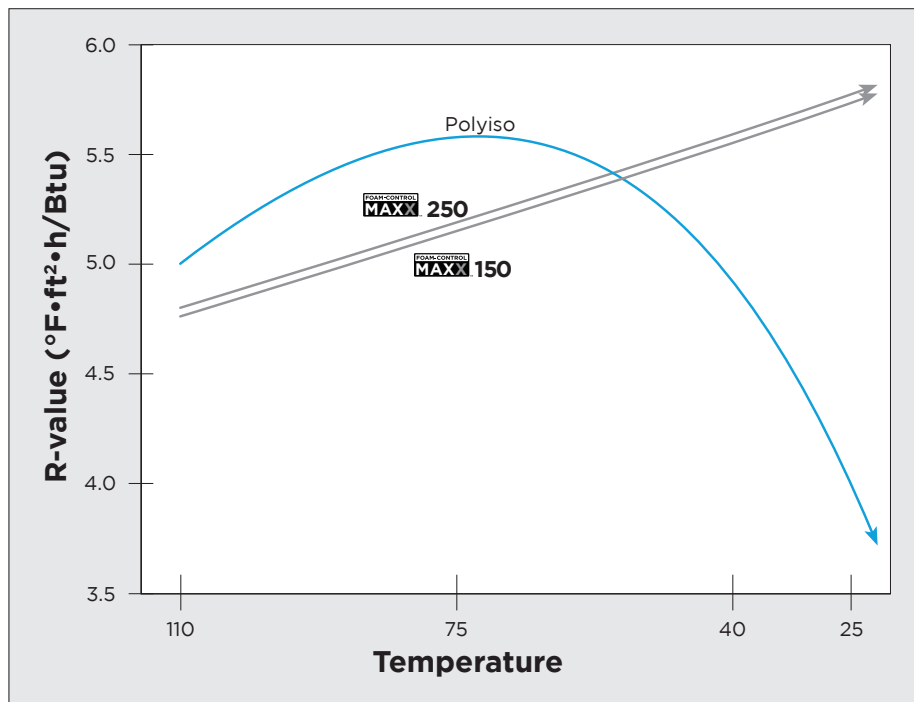
<sup>1</sup> R-values at 75°F and are based on 1-1/8" thickness, units are °F·ft<sup>2</sup>·h/Btu

<sup>2</sup> The LTTR value commonly published from testing to ASTM C1303 or CAN/ULC-S770 is an estimate for the R-value of the insulation after 5 years.

<sup>3</sup> Estimate based on 80% of published R-value

## Foam-Control MAX Powers Up at Cold Temperatures.

The R-value of Foam-Control MAX increases as the temperature gets colder. In contrast, the R-value of Polyiso drops when temperature conditions are cold.



## Foam face-off: Choosing Foam-Control MAX over Polyiso.

- Foam-Control MAX powered by graphite provides a stable long-term high R-value at a lower cost
- Foam-Control MAX uses a blowing agent with low global warming potential and low ozone depletion
- Foam-Control MAX meet strength requirements at a lower cost
- Foam-Control MAX and Polyiso have resistance to moisture. Foam-Control MAX has a higher vapor permeance leading to superior drying potential
- Foam-Control MAX with **Perform Guard**<sup>®</sup> treatment available to provide termite resistance

## Proven to meet, or exceed, building codes.

Foam-Control MAX is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER11812-05. Foam-Control MAX meets ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation".



## Performance Value.

When you consider all performance characteristics and cost, Foam-Control MAX is your best choice for foam insulation.

Foam-Control MAX has air in its closed cells and therefore has a stable R-value. Many other insulations use blowing agents that cause R-value loss and are harmful to the environment.

Foam-Control MAX has compressive strength to meet specific project requirements.

Foam-Control MAX is manufactured to resist moisture absorption in wetting conditions and release absorbed moisture quickly during drying periods, which means Foam-Control MAX maintains R-value.

## Ready to take control? Start here.

If you're ready to have Foam-Control MAX contribute to your next project, just contact your nearest Foam-Control MAX manufacturer and Technical Sales Representative. We will be happy to give you design consultation, information about Foam-Control MAX products, pricing, and answers to all of your questions.



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FCM19-01/19



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