WHAT'S THE DIFFERENCE BETWEEN FOAM-CONTROL PLUS+ AND XPS INSULATION

Foam-Control PLUS+ is an ICC-ES and UL recognized insulation which has 50 years of proven performance.

There are marketplace misconceptions on the performance of Foam-Control PLUS+ compared to XPS (extruded polystyrene) insulation.

FOAM-CONTROL™ PLUS+

AN ARCHITECTURAL INSULATION LIKE NO OTHER

FOAM-CONTROL™ PLUS+ COMPARED TO XPS

There are many myths about the performance of Foam-Control PLUS+ compared to XPS insulation.
– Consider these facts and make an educated decision –

FOAM-CONTROL™ PLUS+

ASTM C578 Standard Compliance.

Foam-Control PLUS+ is manufactured in compliance with ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation".

UL and ICC-ES Recognition.

Foam-Control PLUS+ is recognized in UL ER11812-01 and ICC-ES ESR-1006 evaluation reports.

Closed Cell Polystyrene Foam Filled with Air.

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

R-value: Stable Long-Term.

Foam-Control PLUS+ is stable and the R-value will not change with time.

Excellent Water Resistance.

Foam-Control PLUS+ is a closed cell polystyrene foam which is naturally water resistant. Foam-Control PLUS+ has demonstrated lower water absorption than XPS in several long-term exterior exposure studies. Don't be fooled by comparisons using short term laboratory tests which are conducted for only 24 hours.

R-value: Water Exposure.

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

Vapor Permeance.

The vapor permeability of Foam-Control PLUS+ ranges from 2.5 to 5.0 perms for a 1 in. thick material. This is approximately 2-3 times better than XPS.

XPS

ASTM C578 Standard Compliance.

XPS is manufactured in compliance with ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation".

Limited Recognition.

Code reports for XPS are not available from UL. Some, but not all manufacturers have ICC-ES reports.

Closed Cell Polystyrene Foam Filled with an Unknown Gas.

XPS is a closed cell foam. It is manufactured from polystyrene, blowing agents, and dyes which are extruded into boards. XPS generally contains HFC's such as HFC 134a within the closed cells. HFC's are harmful to the environment.

R-value: Loses R-value over Time.

XPS is not stable and the R-value will drop over time as the cell gases escape.

Excellent Water Resistance.

XPS is a closed cell polystyrene foam which is naturally water resistant. The water resistance of XPS is published for exposure to water in a laboratory after only 24 hours. Short term laboratory results do not correlate to long-term performance of XPS in exterior exposure conditions.

R-value: Water Exposure.

XPS is manufactured to resist moisture absorption in wetting conditions, but long-term in-situ testing has shown XPS traps water due to its low drying potential. This means XPS loses R-value.

Vapor Permeance.

The vapor permeability of XPS is typically 1.5 perms for a 1 in. thick material. XPS over 1.5 in. thick will act as a vapor retarder which may trap moisture in some climate zones.

FOAM-CONTROL™ PLUS+ COMPARED TO XPS

FOAM-CONTROL™ PLUS+

A Great Value.

When purchasing insulation materials, the cost per R-value and strength are critical benchmarks. Foam-Control PLUS+ is available in four different types which comply with ASTM C578. Products with compressive strengths of 15, 25, 40, and 60 psi are available. The wide range of Foam-Control PLUS+ types makes selecting the best product for your application easy. The cost per R-value for Foam-Control PLUS+ is much less than XPS.

XPS

Expensive.

XPS is available in a limited number of types which comply with ASTM C578. Products with compressive strengths of 15 and 25 psi are most common. Although XPS has a slightly higher R-value, the cost per R-value is much higher making XPS a more expensive insulation. In addition, the R-value is not stable for the life of the product.

Don't Compromise, Foam-Control PLUS+ insulation provides more thermal resistance (R-value) per dollar.

Selecting Foam-Control PLUS+ vs. XPS Insulations.

	Compressive Strength (psi)	Density (lbs/ft³)	R-value/inch[1] °F·ft²·h/Btu
FOAM-CONTROL™ PLUS+ 150	15	1.5[2]	4.2
XPS Type X	15	1.3	4.5[3]
FOAM-CONTROL™ PLUS+ 250	25	2.0[2]	4.4
XPS Type IV	25	1.45	4.5[3]
FOAM-CONTROL™ PLUS+ 400	40	2.5[2]	4.4
XPS Type VI	40	1.8	4.5[3]
FOAM-CONTROL™ PLUS+ 600	60	3.0[2]	4.5
XPS Type VII	60	2.2	4.5[3]

[1] R-value at 75°F
[2] Nominal
[3] XPS uses blowing agents that cause R-value loss over time. Projected long-term R-value.

When comparing the performance of Foam-Control PLUS+ to XPS insulation, Foam-Control PLUS+ is the clear winner.

Foam face-off: Foam-Control PLUS+ outperforms XPS and Polyiso.

- Foam-Control PLUS+ provides more R-value at a lower cost
- XPS and Polyiso use blowing agents that cause R-value loss over time
- Polyiso loses R-value during cold and extreme high temperature exposure
- Foam-Control PLUS+ has a stable long term R-value
- Foam-Control PLUS+ available in 15, 25, 40, and 60 psi strengths at a lower cost
- XPS has shown to take on moisture in building applications where water is present and has a low potential to dry
- Foam-Control PLUS+ has a superior drying potential
- Foam-Control PLUS+ is more vapor permeable to help avoid moisture problems

Proven to meet, or exceed, building codes.

Foam-Control PLUS+ is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER11812-04.

Foam-Control PLUS+ meets ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation".

Performance Value.

When you consider all performance characteristics and cost, Foam-Control PLUS+ has the best performance value of any commercially available foam insulation.

Foam-Control PLUS+ has a wide range of compressive strengths to meet specific project requirements.

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

Ready to take control? Start here.

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

ACH FOAM TECHNOLOGIES

For further information about Foam-Control EPS visit www.achfoam.com

Foam-Control PLUS+ products are manufactured by AFM Corporation licensees.

FCP38-11/15

FOAM-CONTROL™ PLUS+

AN ARCHITECTURAL INSULATION LIKE NO OTHER