

The blowing agents used in extruded polystyrene (XPS) insulation is known to deplete overtime reducing the insulation value. However, both graphite polystyrene and expanded polystyrene (GPS and EPS) insulation use air as the blowing agent, which does not reduce the R-value of the insulation.

The newest version of CAN/ULC S701¹, "Standard for Thermal Insulation, Polystyrene Boards and Pipe Covering," now recognizes the reduction in R-value of XPS insulation products, and explicitly requires XPS to test and report long-term thermal resistance (LTTR) values.

CAN/ULC S701 is the Canadian standard that all EPS and XPS insulation material are required to comply with, in accordance with provincial building codes and the 2010/2015 National Building Code of Canada.

THE MINIMUM R-VALUE FOR XPS INSULATION HAS BEEN LOWERED

The new required minimum LTTR for XPS insulation is R-4.7/in (RSI 0.84/in). Previous versions of CAN/ULC S701 allowed XPS insulation to state R-values closer to R-5/in.

XPS INSULATION CANNOT CLAIM A TRUE R-5 PER INCH

Manufacturers of XPS insulation can no longer claim a "true" R-5/in, and refer to CAN/ULC S701 as the supporting document for this claim.

Although, the new version of CAN/ULC S701 was released earlier this year, the XPS insulation industry will have to comply to the new LTTR requirements, and without supporting documents insulation manufacturers will have to state the new minimum R-value of R-4.7/in on XPS insulation products.

XPS INSULATION AND HALO ARE EQUAL IN R-VALUE

Because Halo is made with GPS (graphite infused EPS), the thermal resistance values between XPS and Halo are now equal at R-4.7/in.

In addition, the advantage of Halo over XPS is the stable R-value GPS provides. Halo offers a Zero Thermal Drift guarantee through the life of all Halo products.

For XPS insulation, the LTTR represents the R-value after 5 years in laboratory conditions. However, the blowing agents used in XPS is known to continually deplete during the life of the product so R-values less than the LTTR can be expected beyond 5 years in use.

For further information contact your local Halo representative or e-mail info@buildwithhalo.com.

1. CAN/ULC S701.1-2017, "Standard for Thermal Insulation, Polystyrene Boards and Pipe Covering."