

EPS Earns High Grades for Below Grade Insulation

It has been a mighty cold February and a perfect time to pick the topic of insulation for this month's blog. Last month we discussed the benefits of using expanded polystyrene (EPS) insulation for roofing; however, to get your home or business thermally sound, it starts below grade level.



Photo Source: www.achfoam.com

In today's market, consumers and builders are demanding homes to be built energy and resource efficient. Is it possible to get the best performing material, save on initial costs *and* benefit from long term savings in one product?

If you choose EPS the answer is YES!

So why EPS verses XPS (extruded polystyrene) and what are the differences? First let's talk about what EPS is and isn't.

What exactly is EPS? Although it is commonly referred to as Styrofoam™, that label is incorrect—EPS is *not* Styrofoam. Styrofoam is a Dow trade name that is an extruded polystyrene (XPS) product and actually blue in color. EPS is a lightweight, closed-cell, rigid white bead board. This cost effective product has long lasting thermal insulation properties and is also moisture resistant, reducing the risk of mold and mildew, making it an ideal choice for below grade insulation. It is available in several compressive strengths to withstand load and backfill forces. The marketing forces behind the extruded products gained them a great market share in the construction industry. However, independent 3rd party studies have proven that EPS outperforms and outlasts its extruded counterpart.

In below grade applications, water and moisture must be considered. According to a **15-year In-Situ study**¹, XPS showed water absorption by volume 18.9% while EPS only 4.8%. Water absorption affects the overall performance of the material which affects the overall R-Value. This study showed that EPS retained 94% of its R-Value while XPS retained only 52%.