THERMO SHIELD INSULATION OPTIONS

EXPANDED POLYSTYRENE (EPS)

Rated at R4 per inch; EPS foam insulation boards are more permeable to air and moisture than XPS, but it doesn't retain moisture to the same extent because of it's more closed cell structure and it's breathability which lets it dry out. Two inches of EPS foam board has a moisture permeability rate of between 60 and 75 ng (1 to1.25 perms), which is on the cusp of qualifying it as a type II vapour retarder,.

- Used in Roof, Wall, Floor, Below Grade & Structural GeoFoam applications
- Used most widely in insulated concrete forms and structural insulated panels
- Highest average R-value per dollar (about 4.6 R per inch) – costs the least, while meeting or exceeding all required building and energy codes

THERMO SHIELD EPS

EXTRUDED POLYSTYRENE (XPS)

XPS is Rated at R5 per inch, Above grade XPS foam acts as a vapour retarder and becomes even less moisture permeable the thicker it is - 1 inch is about 1 perm, 2 inches about .5 perms.

Styrofoam, by DOW Chemicals, is now manufactured with HCFC blowing agents which have 94% less ozone depletion potential.

- Easily recognized by its blue, green, or pink color
- Falls in the middle of the three types of rigid-foam insulation in both cost and R-value
- Used most in walls or below grade applications
- Recyclable, and at about R-5 per inch

THERMO SHIELD XPS

POLYISOCYANURATE (Polyiso, ISO)

A thermoset plastic product typically produced as a foam and used as rigid thermal insulation panel. When faced with **Synstone** cementitious panel for its high strength [(amoung its other physical properties including excellent water absorption (2.5%)] **Thermo-ShieldISO** becomes an impact resistant panel with Rvalue of R=6 - R=7 per inch.

- Most used in roofing applications
- More expensive
- Pay off with (aged) R-values as high as R-6.5 per inch.

THERMO SHIELD ISO