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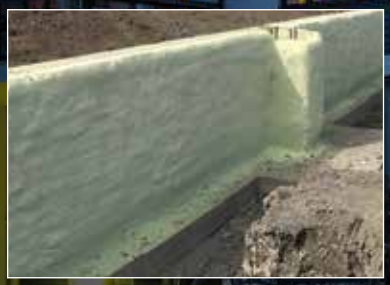
BUILDING SOLUTIONS



FOR A DRY AND DURABLE EXTERIOR FOUNDATION

CLOSED-CELL SPRAY FOAM

A stable and watertight building envelope is difficult to achieve when weather such as rain, snow and ice are impacting your foundation. Issues such as cracks, water infiltration and wood rot undermine the best building structure.

PRODUCT FEATURES

- High R-value means lower energy costs
- Perfect seal eliminates leaks and water damage
- Quick installation saving time on projects
- Good adhesion means it will not sag or move over time
- Suitable for all building types
- Will not support mold or fungal growth
- Durable and will not deteriorate over time
- Continuous barrier prevents water infiltration, no joints
- Resistant to flood damage[3,4]

With an insulation value of R-6/inch, Heatlok Soya HFO spray foam insulation can easily achieve the applicable insulation requirements while exceeding the energy code specifications[1]. The product is sprayed from the exterior and provides continuous, fully bonded and seamless insulation. No surface preparation needed, no seams to seal, no gaps to fill, and no boards to glue in place. Heatlok Soya HFO expands 30 times its initial volume in 5 seconds and seals the entire foundation. Heatlok was tested below grade by the NRC[2] and the study concluded that the product retains all of its properties and does not absorb water over time.

The ideal time and most effective way to insulate and waterproof the foundation is from the exterior while excavating an existing foundation and before backfilling a new foundation. Perfect seal between the footing and the wall.

In new buildings the foundation can easily be accessed from the exterior and insulated on its cold side, below grade, before backfilling, which is the preferred method of insulating a below grade foundation. Insulating the foundation from the exterior[5] provides better energy efficiency, no thermal bridges, stable interior temperature, and reduction in potential condensation. Existing buildings often have to be excavated to waterproof the foundation as a result of water infiltration from a pour design and/or execution. Heatlok Soya HFO can be sprayed on the entire surface of the foundation and even cover the footing to create a slope towards the drain. Applying Heatlok Soya HFO directly to the concrete, blocks, or stone is recommended, depending on the type of foundation.

Heatlok Soya HFO qualified as a damp-proofing material and when waterproofing is required polyurea product, bituminous coating, or drainage membrane could be directly installed on the foam in areas where water accumulates or the water table is above the footings.

Bituminous coating applied directly over the foam.

Drainage membrane that will be lifted in front of the foam as the soil is backfilled.

**WHEN AN OLD FOUNDATION IS EXCAVATED,
IT IS THE IDEAL TIME TO INSULATE FROM THE EXTERIOR WITH HEATLOK SOYA HFO SPRAY FOAM.**

Heatlok Soya HFO is ideal for insulating old concrete or stone foundations from the exterior.

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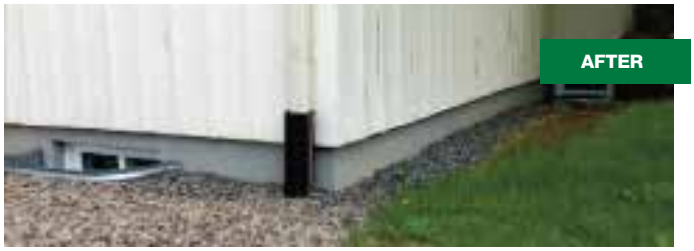
FINISHING THE ABOVE-GRADE PORTION

What about the above-ground portion of the foundation? Many options are available but the easiest option is to install a galvanized Z-bar structure on the above-ground portion of the foundation. This will provide a continuous building envelope system below and above ground. This must be done before applying Heatlok Soya HFO. Once the insulation work has been completed, we recommend installing a light-cement board on the Z-bars. A finish is then applied over the light-cement board once the backfilling has been completed to provide the desired appearance.

During application of spray foam and z-bars



Finished project

REFERENCES:

1. Quebec and Canada building code 2005, 2010 and 2015
2. In-situ Performance Evaluation of Exterior Insulation Basement System (EIBS) - Spray Polyurethane Foam Summary Report - IR-820F, NRC
3. Technical Bulletin 2, Flood Damage - Resistant Materials Requirements, FEMA, August 2008
4. Severe Weather and Closed-Cell Spray Foam: A Better Building Technology, Honeywell
5. NRC/CNRC - Performance Guidelines for Basement Envelope Systems and Materials, October 2005

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