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September 9, 2022

Subject: Under Slab Insulation Projects

Huntsman Building Solutions' Heatlok closed-cell spray polyurethane foam products (HL ccSPF) have been used for under slab insulation in numerous projects, both residential and commercial. The products' seamless continuity, installation quality, field resistance, durability, and its insulating, air barrier, vapour barrier and gas barrier properties, make them products of choice for this application. Heatlok HFO Pro, Heatlok HFO High Lift, Heatlok XT High Yield, Heatlok XT High Lift and Heatlok Soya HFO (Canada) provide perfect airtight protection.

Insulating a slab-on-grade is often a lengthy process, requiring substantial manpower and numerous products, while often yielding inadequate results. Thus, Spray Polyurethane Foam (SPF) is becoming a choice alternative because its installation is advantageous in terms of speed, cost and quality. HL ccSPF recently replaced traditional under slab insulation systems due to its quick application and its cost savings to professionals. In a single application, HL ccSPF provide superior insulation, a perfect air barrier and a vapour barrier. It also prevents soil gases, mainly radon, from entering the building. In short, the occupants are warm, comfortable and protected from radon.



The details of sealing perforations often cause delays on job sites. Plus, the quality of the details is often imperfect. With HL ccSPF, sealing these details is perfect and its speed of execution is unrivaled by any other product.

With R-value ranging from R-6.3 to R-7.4 per inch, HL ccSPF, applied in a 2" (50 mm) thickness, provides \pm R-13 insulation under the entire surface of the slab, exceeding Building Code requirements. The product is sprayed directly on the crushed stone and provides continuous insulation, with no seams.

HL ccSPF also has very good compressive strength (18 – 35 psi). During construction, workers can move about with wheelbarrows and equipment without damaging the HL ccSPF; it will not

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crack or break. All of the gravel can be sprayed in a single step. Application is very quick and generates no waste. No scraps, no wasted materials.

Price-quality ratio

Another advantage of one-step under slab insulation is the cost saving. Application is very quick and the product cost will be lower per square foot, since the applicator's travel time and prep are offset by the volume to install, compared with a conventional insulation system that involves multiple steps, several materials, plus more labour, which leaves more room for error. If the project requires other applications of sprayed-on polyurethane foam, for instance on the outside wall, the cost per square foot will be even less since the volume is greater. The installation quality consisting of panel + polyethylene + sealant + glue and tape is directly affected by the quality of the workmanship and the protection of the works before and during the slab pouring. In just one step with HL ccSPF, you get a durable and perfectly sealed structural envelope during and after the work. All plumbing pipes and vents, sumps and drains in the slab and walls are sealed in a single operation, without any complication regarding compatibility of materials. Adhesion to the concrete wall is perfect; there is no possible air space for condensation and mold to penetrate. HL ccSPF delivers an insulation and air barrier system, with vapour barrier, all in one step, quickly and effectively.

Resistance to radon gas

HL ccSPF has been tested for its resistance to radon gas by recognized independent laboratories. Tests compared HL ccSPF's performance with that of 6-mil polyethylene (CAN-CGSB 51.34-M). The ISO/DIS 11665 test method quantifies radon gas migration through an opaque material (joint free). Results showed that 1" (25.4 mm) of HL ccSPF is more resistant to radon migration than 6-mil polyethylene. The products have also been tested as resistant to methane. Thus, HL ccSPF offers complete protection against the infiltration of noxious soil gases.

For any further information, please don't hesitate to contact us.

Thank you,

Maxime Duzyk
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Commercial projects

Many commercial projects such as fire stations, warehouses, commercial buildings, freezer and industrial refrigerators, and many more, are commonly insulated with HL ccSPF.

Fire Station



Warehouse



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Warehouse



Commercial, Institutional and Multi-Residential Buildings



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Aquatic Center



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Residential projects

Many residential projects have been insulated with HL ccSPF for over 30 years.

Garage



Basement – Heated floor



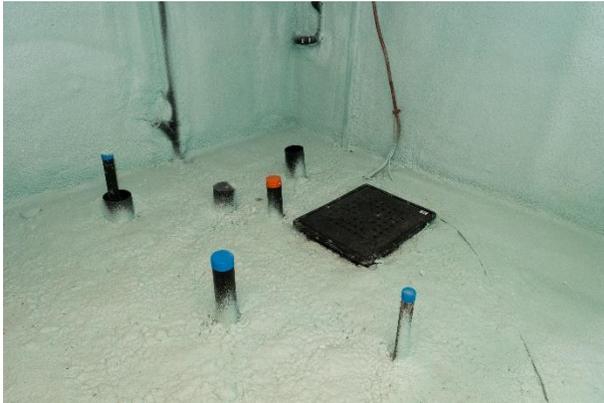
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Slab - Residential



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