New Way to Keep Basements Dry

A FINISHED basement is a great way to squeeze more living space from a home. But moisture seeping up through concrete basement slabs can dampen the air enough to breed mold and mildew, which can damage flooring and other finishes.

The traditional way to overcome this problem is somewhat complicated and time consuming: You cover the slab with a layer of polyethylene, install 2-inch-wide wood sleepers every 16 inches, and top it all with a plywood subfloor and a layer of carpet or wood flooring.

But now there’s an easier and faster way. Delta-FL, from Cosella Dörken in Beamsville, Ontario, has devised a system made up of a high-density polyethylene sheet material with a dimpled surface. It’s installed with its dimples down to create a 5/16-inch-thick air space above the slab, and can be covered with a plywood subfloor and topped off with carpet or flooring.

The system exploits the concept of vapor pressure—that is, water vapor seeks to equalize itself by moving from areas of high pressure to areas of low pressure. In a conventional basement, dry air in the living space acts as a magnet for water vapor seeping up through the concrete. But with the Delta-FL system, the dry air in the dimples provides a sufficient air gap, equalizing the water pressure above and below the concrete slabs.

Though the air in the living space is completely isolated from the system, Delta-FL is designed to allow small amounts of water vapor into the room to maintain a healthy humidity level.—Charles Wardell