

## **SEPTEMBER 19, 2001 - "Moisture and Vapor Transmission through Slab-on-Grade"**

*Speaker:* Tom Barbar, Incon

Tom Barbar of Incon, raised quite a few eyebrows discussing "Sick Building Syndrome." He said that whole buildings are being bulldozed and homes are being burned to get rid of a deadly black mold that is primarily attacking infants, sick people and old people. The mold issue is quickly getting out of hand such that the insurance companies in Texas are balking at providing coverage. This will likely leave the builders, engineers and architects footing the legal bills.

Water vapor is a molecular gas which flows from areas of high pressure (i.e., lower temperature, higher humidity below a slab) to low pressure (i.e., higher temperature, lower humidity in an air-conditioned building). According to Tom, we are just now realizing the necessity of installing proper vapor barriers below our slabs to prevent floor covering failures and mold.

Mr. Barbar said that the standard of practice below slabs in the Houston area is to install 6 mil polyethylene sheets with little concern for complete sealing, especially around plumbing penetrations, and at a cost of about \$0.04/SF.

Mr. Barbar recommended that a minimum 10 mil vapor barrier (not "moisture barrier" or "dampproofing" or as called out by the Standard Building Code, "vapor retarder") be specified which meets ASTM E1745, with a water-vapor permeance of 0.04 perms or higher in accordance with ASTM E96. He demonstrated that a 10 mil polyolefin sheet from Stego Industries meets that specification provided the joints are taped and there is no damage during construction. He showed that the sheet is nearly impossible to tear and he said it costs \$0.14/SF. See <http://www.stegoindustries.com/> for further information.

Thanks for speaking to our group Tom.

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