PERMEABILITY TESTING, PERM RATING, & WATER VAPOR TRANSMISSION RATE

PERMEABILITY

Permeability is a measure of the amount of water vapor (moisture) that can pass through a specified material in a certain amount of time. The measure and degree of permeability is expressed in units referred to as "Perms". Material with high Perm levels of 1 or over will allow more moisture or water vapor to pass through than those with lower Perm values.

TESTING

While no specific test procedure has been officially recognized, or sanctioned, by the construction industry to date, many companies, to measure the permeability of their products, are using ASTM E-96-05 Standard Test for Water Vapor Transmission of Materials.

PERM RATING

The effectiveness of a vapor barrier is measured by its "Perm Rating", which is the ratio of porosity of a material to passage of water vapor. A material having a vapor transmission rate of 1 Perm or less is considered a good vapor barrier. Above 1 Perm is a poor vapor barrier.

WATER VAPOR TRANSMISSION RATE

A Perm Rating for a material is the number of grains of water vapor (7000 grains = 1 lb.) that will pass through 1 sq. ft. of the material in 1 hour when the vapor pressure differential between two sides of the material = 1 inch of mercury (0.49 psi)

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