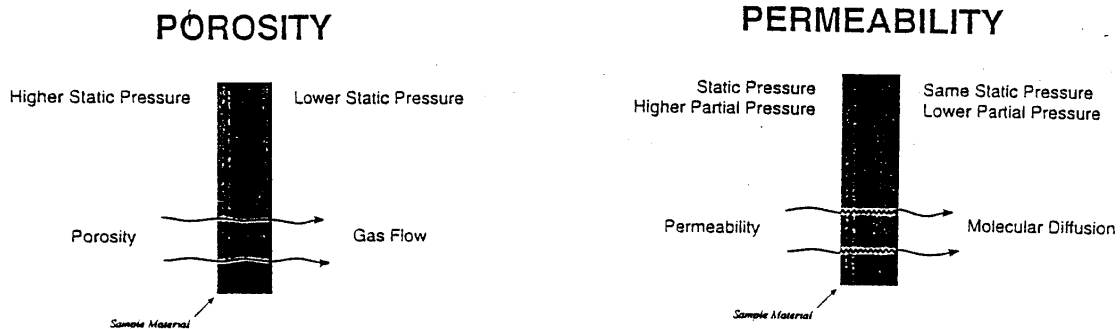


SUBJECT: THE DIFFERENCE BETWEEN POROSITY AND PERMEABILITY



Let's consider the case of a porous material challenged by a test gas.

POROSITY is the measure of gas flow (such as water vapor) through a barrier material (such as paper) when a static pressure difference exists across the barrier. This flow can be measured in different ways, and is usually expressed in Gurley seconds or Darcies. This is not a real-world test if the sample has the same static pressure on each side in real use. Also this test does not measure permeability, diffusion, or transmission rate.

PERMEABILITY is the measure of a gas moving through a barrier material when there is equal static pressure on both sides of the barrier, but where the partial pressure is different. This is a real-life situation with many non-woven, textiles, microporous membranes, and papers. This type of test, as performed by the new PERMATRAN-W® model 100K, measures the actual permeability, diffusion, and transmission rate of water vapor gas through barrier materials, both porous and non-porous.