PROTECRETE®
CONCRETE'S BEST SOLUTION

DENSIFIER AND THE RESTRICTION OF VAPOR TRANSMISSION

How does an application of PROTECRETE Densifier allow concrete to breathe, yet prevent transmission of substances such as radon, methane or other harmful gases?

Part of the answer lies in the nature of gas transmission in PROTECRETE treated concrete. Some gases are soluble. Gases that have a low molecular weight are more soluble than gases with a high molecular weight. Also the way the electronic configuration of the gas combines with the electronic configuration of the residual PROTECRETE subsurface barrier created inside the treated concrete determines solubility.

As a compatible gas permeates the PROTECRETE treated concrete, and subsequently the precipitated waterproof subsurface barrier inside the concrete, it dissolves and emerges as a gas, re dissolves and re-emerges dependent upon the capillary pores (interstitial pores) and the gel pores (discontinuities) that may remain internally accessible to the gas. Oxygen with an atomic number of 8 and an atomic weight of 16 has a low enough molecular weight to diffuse, to dissolve and to move under partial pressure at any given temperature. All of its molecules have the same kinetic energy. The kinetic energy being the energy of motion. A large molecule will have a high mass component of energy and a low velocity component. A small molecule will have a high velocity component and a low mass component. This will affect reaction kinetics and thus solubility. It will also determine solubility at the surface and mobility through the substance media. In this case, PROTECRETE treated concrete.