

HOW DOES P2000 ENHANCE THE STANDARD BUILDING ENVELOPE?

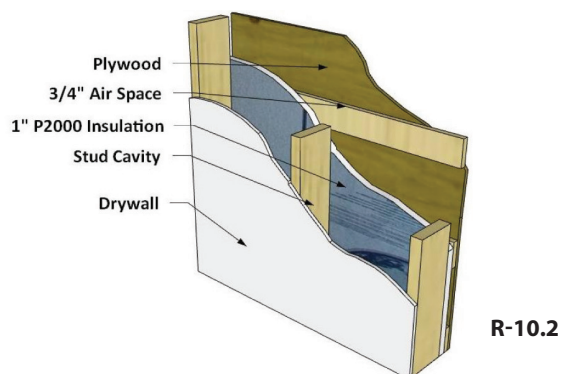
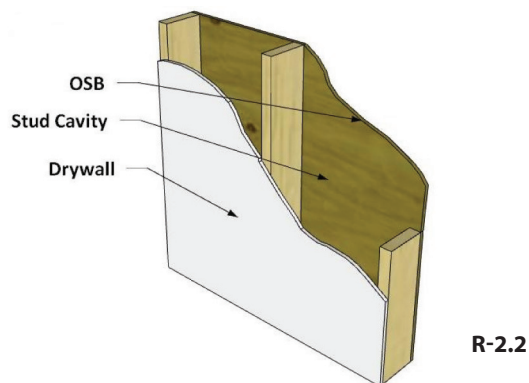
In today's marketplace, insulation is sold based on center of cavity thermal resistance, or R-value. However, R-value is only one piece of the thermal equation. A list of common issues that plague conventional insulations when installed in a building envelope include:

- Conductive heat loss
- Air leakage and convective heat loss (can be 35% of heat loss/gain in a building envelope)
- Moisture infiltration (water is highly conductive)
- Radiative heat loss (can be 55% of heat transfer in ordinary air spaces)
- Installation deficiencies
- Thermal bridging (average of 25% of a residential building's surface area is framing)
- Long term stability

Most of the thermal performance testing completed on conventional insulations focus on their resistance to conductive heat transfer as measured by R-value in the ASTM C518 test. This standard laboratory test measures thermal resistance under a specific set of conditions. In reality, R-value of a particular material is dependent on a number of environmental and installation parameters, external to the material itself.

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Being a system based insulating product, P2000 is engineered to work with the other building assembly components to minimize heat loss by the mechanisms previously outlined. When reflective materials are incorporated in the building envelope, the combination of orientation as well as air spaces can elevate the performance of a wall, ceiling or floor assembly well beyond the recognized R-values of the building materials alone. For illustration purposes, consider the following tests completed on a wall assembly :



Note: Wall assemblies for illustration purposes only. Refer to P2000 Application Guide for detailed installation instructions. P2000 enhances the performance of the wall assembly far beyond its material R-value, plus it is an effective air and vapor barrier.

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