

Technical Bulletin #28e

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VAPOR RETARDERS WITH PREMIER SIPS RESIDENTIAL PANELS

Questions about using vapor retarders in conjunction with Premier SIPS structural insulated floor, wall and roof panels come up often. When installing Premier SIPS panels, Premier SIPS requires the proper application (as shown in the Premier SIPS Typical Details) of panel mastic at all panel joints. The function of the mastic is to provide a seal against water vapor transmission and air infiltration.

The purpose of this technical bulletin is to provide guidelines for the use of vapor retarders with Premier SIPS in residential applications.

The International Residential Code (IRC) requires the following:

VAPOR RETARDERS

Class I or II vapor retarders are required on the interior side of frame walls in Climate Zones 5, 6, 7, 8 and Marine 4.

The definition of vapor retarder class from the IRC is:

VAPOR RETARDER CLASS. A measure of the ability of a material or assembly to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method with Procedure A of ASTM E 96 as follows:

Class I: 0.1 perm or less

Class II: $0.1 < \text{perm} \leq 1.0$ perm

Class III: $1.0 < \text{perm} \leq 10$ perm

The panels that Premier SIPS produces have a perm rating less than 1. Based on the IRC definition of vapor retarder class, Premier SIPS meet the Class II definition. Panel joints are of concern with a SIP system when considering vapor retarder application. Premier SIPS requires that panel mastic be used when joining panels. Premier SIPS also recommends the use of SIP Tape over the panel joints. The SIP Tape is formulated with a perm of less than 1. The combination of the Premier SIPS panels and the SIP Tape meets the building code requirements for vapor retarders.

Typically, 6" wide SIP Tape is used at all wall and roof panel joints as well as at wall panel corners. The connection of roof panels to exterior wall panels requires the use of 12" wide SIP Tape. Roof panels that have joints on supporting beams require 18" wide SIP Tape. A ridge beam is an example of this condition.

The use of an additional vapor retarder, such as polyethylene sheeting, maybe warranted based on the local building code and or climatic conditions. It is up to the design professional to make this determination. If an additional vapor retarder is utilized, it must be installed properly.

Please refer to the Premier SIPS typical details for illustrations of these conditions. The typical details can be requested by calling the number below, or it can be viewed online at www.premiersips.com.