

# Technical Bulletin #32b

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## SEALING REQUIREMENTS FOR PANELS USED IN COMMERCIAL CONSTRUCTION

Premier SIPs are often used in commercial construction for floors, walls and or roofs. The proper use of vapor retarders and SIP Tape in these applications is a common question. The purpose of this technical bulletin is to provide guidelines for the use of vapor retarders, SIP Tape and panel mastic with Premier SIPs in commercial applications.

When installing Premier SIPs, the proper placement, as shown in the Premier SIPs details, of panel mastic at all panel joints is required. The function of the mastic is to provide a seal against air and vapor transmission.

The Building Codes view commercial construction in a different light than residential construction. In commercial construction, framed walls, floors and ceilings not ventilated to allow moisture to escape are required to have vapor retarders installed on the warm-in-winter side of the insulation. Commercial applications address ventilation through mechanical air handling and heat/cooling equipment. The key here is proper ventilation.

Commercial construction, typically, has a mechanical engineer involved with the design of the ventilation system. The mechanical engineer's design will take into account the amount of ventilation the structure requires based on the intended use of the building. In most applications this ventilation provides for numerous air changes which precludes the need for SIP tape or other vapor retarders. In addition, commercial structures intended to be used for storage or general warehouse do not need additional vapor control methods.

Buildings with intended uses involving pools, spas, or other high humidity conditions need to be looked at very carefully by the mechanical design professional with regard to adequate ventilation. In high humidity environments special attention to joint sealing and the use of SIP tape must be addressed.

In commercial construction that does not meet the ventilation requirements of the building code, Premier SIPs suggests that the IBC, as modified or approved by the local building code jurisdiction, be followed with regard to installing a vapor retarder.

If a vapor retarder is required in your commercial project, Premier SIPs recommends the use of SIP Tape over the panel joints. The SIP Tape is formulated with a permeance of less than 1. The APA has determined that OSB has a perm rating of less than 1. Since the OSB skins, of the panels that PBS produces, have a permeance rating of less than 1, the panel joint is the primary area of concern with a SIP system. The combination of the OSB skins and the SIP Tape meets the building code requirements for vapor retarders. Premier SIPs requires that panel mastic be used when joining panels.

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.

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](http://www.premiersips.com).