
SUBJECT: LOW SLOPE ROOFING OVER PREMIER SIPS

Low slope roofing systems are applied over Premier SIPS for both residential and commercial building applications and require that the architect and contractor applicator have a full understanding of the applicable code requirements and the performance of materials and systems.

Low slope roof applications typically utilize a single-ply roofing membrane, built up roof (BUR), or modified bitumen as the roofing system. Within these systems there are several techniques to secure the roof system to the roof deck. These include being ballasted, adhered, or mechanically attached. Ballasted systems rely on overlaid rock or cementitious pavers as a weight to hold the membrane in place. Adhered systems use asphalt or adhesives that are placed on the roof deck or carried on the membrane to adhere the membrane to the underlying roof deck. Solvent based adhesives are not approved by Premier Building Systems as they could cause deterioration of the Premier SIPS rigid insulation core. Water based adhesives are acceptable. In some attached systems, the adhesive layer is applied to a board or sheet known as a divorcement layer, that has been previously mechanically attached to the roof deck. Mechanical attachment is accomplished with the use of long screws through the membrane and insulation layers.

When Premier SIPS are used as the roof deck on a low slope roof system, Premier Building Systems requires that a divorcement material be placed over the SIPs prior to the roof membrane installation. This divorcement layer can be a slip sheet for ballasted systems, a nail applied base sheet for BUR systems, or a cover board such as gypsum, cement, or wood fiber for adhered systems. The application of these divorcement materials will obviate any damage to the top OSB structural skin of the SIP if the roof membrane system were to fail and/or need replacing. The OSB skins of a SIP are part of the SIP's structural component assembly, therefore the OSB skins must remain intact to provide long term structural capacity.

Further consideration needs to be given if the roof system needs to meet a Class A, B or C designation based on ASTM E108 or UL 790 testing. Premier SIPS are rated as a "combustible roof deck". Therefore, low slope roofing systems that can achieve a Class A, B or C rating over a combustible deck should be specified by the architect and installed by the roofing contractor.

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If a Class A rating over a SIPs combustible deck is specified, an acceptable and cost-effective method to achieve the Class A requirement is to apply a layer of gypsum or cementitious board over the SIPs. An example of a gypsum product is ¼” DensDeck®, that is mechanically attached to the SIPs. The attachment of the DensDeck needs to be sufficient to meet wind uplift requirements when used in conjunction with adhered membranes.

In addition to gypsum and cementitious board products, there are also fire rated membranes that can achieve Class A fire ratings when applied over combustible roof decks. In all cases, whatever divorcement material is used, it should meet the requirements of the roofing membrane manufacturer.

Therefore, Premier Building Systems requires that a Dens-Deck* (¼” thickness or greater), or equivalently rated divorcement product in the type and style approved by the Low Slope Roofing System Manufacturer, be attached on top of the Premier SIPS roof deck prior to the installation of fully adhered systems. Mechanical attachment of the divorcement product shall be installed in accordance with the Low Slope Roofing Manufacturer’s recommendation when applied to a 7/16” OSB faced SIP roof deck system.

*DensDeck® is a registered trademark of Georgia Pacific.