

# TL-0006 — Substrate Preparation for PERM-A-BARRIER<sup>®</sup> Liquid Applications

## Technical Letter (US Version)

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PERM-A-BARRIER<sup>®</sup>Liquid Air and Vapor Barrier is commonly applied to one of the following substrates:

### Concrete Masonry Units (CMU)

Application of an air and vapor barrier on CMU walls is important because most concrete block is porous and susceptible to moisture and air infiltration. Standard application procedures should be followed and attention should be given to the following:

- The CMU surface should be smooth and free from projections. Strike all mortar joints full and flush to the face of the concrete block. Fill all voids and holes, particularly at the mortar joints. Alternatively, a parge coat (typically one part cement to three parts sand) may be used over the entire surface.
- All penetrations should be grouted or filled prior to application.

When necessary, provide temporary protection, such as plastic or tarpaulin, at the top of the wall to prevent precipitation from accumulating in the core of the block. In applications where the membrane will be exposed over 60 days, provide plastic or tarpaulin protection over the membrane to prevent exposure to UV rays.

### Glass-Mat Faced Gypsum Sheathing

Glass-mat faced gypsum sheathing is used for direct mechanical application to structural framing as a backing for a variety of exterior claddings or as a soffit material. Its unique glass mat facing provides greater resistance to rain, heat and wind than regular gypsum paper-faced sheathing.

When installing PERM-A-BARRIER<sup>®</sup>Liquid over glass-mat faced gypsum sheathing, no surface treatment is required. PERM-A-BARRIER<sup>®</sup>Liquid has excellent adhesion to the glass-mat surface. In order to ensure a quality application, we recommend the following:

- To avoid deflection of glass-mat faced gypsum sheathing at panel joints, fasten corners and edges with appropriate screws as per manufacturer's recommendations.
- Completely fill the sheathing joint with S100 Sealant and then install a scratch coat (approx. 15-30 mils) of S100 Sealant with a margin trowel or similar onto the face of the sheathing approximately 1 in. (25 mm) on each side of the sheathing joint, ensuring the edges are tapered to prevent shadowing of the spray application.
- Once the sealant is tack free, the PERM-A-BARRIER<sup>®</sup> Liquid may be applied.
- This is the preferred joint treatment for all PERM-A-BARRIER<sup>®</sup> fluid applied membranes.

## Oriented Strand Board and Plywood

Oriented Strand Board (OSB) has become a common material used as a structural wall sheathing. OSB is a structural panel made of wood strands sliced in the long direction and bonded together with a binder under heat and pressure. The product is also manufactured with a textured surface for use in roofing applications to improve safety.

When installing PERM-A-BARRIER®Liquid over OSB or plywood, no surface treatment is required as long as the surface is free from frost, dirt, grease, oil or other contaminants. PERM-A-BARRIER®Liquid has excellent initial and long-term adhesion to both surfaces of OSB as well as to plywood. In order to ensure a quality application, we recommend the following joint treatment options:

- Use OSB and plywood panels that meet the American Plywood Association (APA) Exposure 1 or Exterior exposure durability classification.
- To avoid deflection at panel joints, fasten corners and edges with appropriate screws as per manufacturer's recommendations.
- Completely fill the sheathing joint with S100 Sealant and then install a scratch coat (approx. 15-30 mils) of S100 Sealant with a margin trowel or similar onto the face of the sheathing approximately 1 in. (25 mm) on each side of the sheathing joint, ensuring the edges are tapered to prevent shadowing of the spray application.
- Once the sealant is tack free, the PERM-A-BARRIER®Liquid may be applied.
- This is the preferred joint treatment for all PERM-A-BARRIER®fluid applied membranes.