

TL-0014 — Substrate Preparation for PERM-A-BARRIER® VPL, VPL LT and VPO Applications

Technical Letter

PERM-A-BARRIER® VPL, VPL LT or VPO vapor permeable air barriers are commonly applied to one of the following substrates:

Concrete Masonry Units (CMU)

Application of an air barrier on CMU walls is important because most concrete block is porous and susceptible to 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 five months, provide plastic or tarpaulin protection over the membrane to prevent overexposure to UV rays.

DensGlass Gold® Gypsum Sheathing

DensGlass® Gold 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 on the front and back provides greater resistance to rain, heat, and wind than regular gypsum paper-faced sheathing.

When installing PERM-A-BARRIER® VPL, VPL LT or VPO over DensGlass Gold, no surface treatment is required. PERM-A-BARRIER® VPL, VPL LT or VPO have excellent adhesion to the surface of the DensGlass Gold. In order to ensure a quality application, we recommend one of the following joint treatments.

- 1. 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® VPL, VPL LT or VPO may be applied.
 - This is the preferred joint treatment for high temperature applications, anticipated extended exposure and/or high wind loads.
- 2. To avoid deflection of the OSB or plywood 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® VPL, VPL LT or VPO may be applied.
 - This is the preferred joint treatment for high temperature applications, anticipated extended exposure and/or high wind loads.

Oriented Strand Board (OSB) 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® VPL, VPL LT and VPO 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® VPL, VPL LT and VPO have 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.

Use OSB and plywood panels that meet the American Plywood Association (APA) Exposure 1 or Exterior exposure durability classification.

investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

PERM-A-BARRIER is a trademark, which may be registered in the United States and/or other countries, of GCP Applied Technologies Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status. DensGlass Gold is a registered trademark of Georgia-Pacific Corporation.

© Copyright 2018 GCP Applied Technologies Inc. All rights reserved.

GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

In Canada, GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This document is only current as of the last updated date stated below and is valid only for use in the United States. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2018-04-30

gcpat.com/solutions/products/perm-a-barrier-air-barrier-system/tl-0014-substrate-preparation-perm-a-barrier-0

