

TL-0001 — Chemical Compatibility of PERM-A-BARRIER® Self-Adhered Membranes with Other Materials Technical Letter

Frequently during the design of an assembly, the designer will question the chemical compatibility of PERM-A-BARRIER® self-adhered membranes (including PERM-A-BARRIER® Wall Membrane, PERM-A-BARRIER® Wall Flashing, PERM-A-BARRIER® Detail Membrane, PERM-A-BARRIER® NPS and PERM-A-BARRIER® VPS 30) with other materials. Generally, there is not a chemical compatibility issue if the material contacts the film (top) surface of the membrane. If the contact area is the adhesive component of the membrane, there is need to investigate further. As a general rule, the connecting material must be sound, functional and firmly bonded to the substrate. The PERM-A-BARRIER® membrane should overlap onto the existing product a minimum of 6 in. (150 mm).

The design of the connection between the two materials will vary depending on the composition of the material. Some of the more common materials are detailed below.

Waterproofing Materials

Cured Neoprene

PERM-A-BARRIER® membranes may be applied directly to clean cured neoprene. Dusty neoprene must be cleaned and primed with BITUTHENE® Primer B2 prior to the attachment of the new membrane.

Uncured Neoprene

Uncured neoprene is not compatible with the adhesive component of the membrane. Therefore, PERM-A-BARRIER® membranes should not be applied directly to uncured neoprene. When the membrane must terminate onto uncured neoprene, an oil resistant barrier layer between the adhesive and the uncured neoprene is required. This barrier layer should be a 0.004 in. to 0.006 in. (0.1 mm to 0.15 mm) aluminum or polyester sheet, fully adhered to the uncured neoprene. Priming of the aluminum or polyester is not necessary. A two part polyurethane may also be utilized as a barrier, if fully cured.

Butyl Sheet

PERM-A-BARRIER® membranes can be applied directly to Butyl sheet using the same guidelines as described for cured neoprene.

Chlorinated Polyethylene (CPE)

PERM-A-BARRIER® membranes can be applied directly to chlorinated polyethylene. Follow the guidelines for cured neoprene.

Polyvinyl Chloride (PVC)

Plasticized (flexible) PVC is not compatible with the adhesive of the PERM-A-BARRIER® membrane. Therefore, the membrane should not be applied directly to PVC sheet waterproofing without the use of a barrier layer. Refer to uncured neoprene for application guidelines. PERM-A-BARRIER® membranes can be applied to PVC pipe or other rigid PVC.

Ethylene Propylene Diene Monomer (EPDM)

EPDM is not compatible with the adhesive component of the PERM-A-BARRIER® membranes. Therefore, these membranes should not be applied directly to EPDM. Refer to uncured neoprene for application guidelines.

Asphalt or Coal Tar Residue

Asphalt or coal tar must be fully-cured, sound, and firmly bonded to the substrate. All surfaces must be primed with BITUTHENE® Primer prior to installation of the PERM-A-BARRIER® membranes.

Polyurethane Based Fluid Applied Waterproofing

Many fluid applied waterproofing systems are made from polyurethane. PERM-A-BARRIER® membranes will adhere to clean, dry, fully cured polyurethane waterproofing. Priming of the polyurethane surface with BITUTHENE® Primer is necessary. Polyurethanes modified with asphalt or coal tar do not affect compatibility with PERM-A-BARRIER® membranes.

Asphaltic Dampproofing

PERM-A-BARRIER® membranes may be installed directly over cleaned, asphaltic dampproofing. Priming of the dampproofing with BITUTHENE® Primer is necessary. Allow primer to dry fully prior to applying membrane and follow all other application instructions.

Wood Preservatives and Treatments

Avoid contact with wood treated with creosote, penta-chlorophenol or linseed oil.

Sealant and Caulking Materials

For PERM-A-BARRIER® Wall Membrane, PERM-A-BARRIER® Wall Flashing, PERM-A-BARRIER® Detail Membrane (see subsequent section for PERM-A-BARRIER® VPS 30 and PERM-A-BARRIER® NPS).

Adhesion and or compatibility with individual caulks and sealants may vary. It is recommended that particular products be pre-tested prior to full application.

Polyurethane

Two part polyurethanes are acceptable for use under PERM-A-BARRIER® membranes, provided they are fully cured (i.e. solvent has evaporated completely). Single part urethanes are generally moisture cured and, if covered by the membrane, will not cure. One part and two part poly-urethanes may be used on top of the membrane.

Silicone

Both acetoxy and neutral cure silicones are compatible with the self-adhesive layer and the film of PERM-A-BARRIER® membranes. Most silicone sealants have good adhesion to the film, but PERM-A-BARRIER® membranes may only have moderate adhesion to silicone sealants.

Acrylic Latex

Acrylic based sealants are acceptable for use under PERM-A-BARRIER® membranes. PERM-A-BARRIER® membranes have moderate adhesion to these sealants. Acrylic Latex sealants, however, are generally slow to cure and may have poor adhesion to the film of PERM-A-BARRIER® membranes.

Butyl

Butyl sealants are acceptable for use under the membrane, provided they are fully cured (i.e. solvent has evaporated completely). Butyl sealants may be used on top of the membrane.

Sealant and Caulking Materials

For PERM-A-BARRIER® VPS 30 and PERM-A-BARRIER® NPS

Adhesion and or compatibility with individual caulks and sealants may vary. It is recommended that particular products be pre-tested prior to full application.

Polyurethane

Two part polyurethanes are acceptable for use under PERM-A-BARRIER® VPS 30, provided they are fully cured (i.e. solvent has evaporated completely). Single part urethanes are generally moisture cured and, if covered by the membrane, will not cure. One part and two part polyurethanes may be used on top of the membrane. Most polyurethanes may only have moderate adhesion to the film of PERM-A-BARRIER® VPS 30.

Silicone

Both acetoxy and neutral cure silicones are compatible with the self-adhesive layer and the film of x PERM-A-BARRIER® VPS 30. Most silicone sealants may only have moderate adhesion to the film, and the adhesive layer of PERM-A-BARRIER® VPS 30.

Acrylic Latex

Acrylic based sealants are acceptable for use under PERM-A-BARRIER®VPS 30. PERM-A-BARRIER®VPS 30 has moderate adhesion to these sealants. Acrylic Latex sealants, however, are generally slow to cure and may have poor adhesion to the film of PERM-A-BARRIER®VPS 30.

Butyl

Butyl sealants are acceptable for use under the PERM-A-BARRIER®VPS 30, provided they are fully cured (i.e. solvent has evaporated completely). Butyl sealants may be used on top of the Membrane, but may only have moderate adhesion to the film of PERM-A-BARRIER®VPS 30.

Note: Bituthene[®] Liquid Membrane and Bituthene[®] Mastic have excellent adhesion to the film of the PERM-A-BARRIER[®] VPS 30 and are used for end of day terminations and repairs. Please refer to our standard details for specific detailing requirements.

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