

TL-0007 — Exotherm of PERM-A-BARRIER[®] Liquid Membranes

Technical Letter

PERM-A-BARRIER[®] Liquid is a two component reactive system. One of the reactions that takes place during the cure process is exothermic (generates heat) and if the heat generated is not able to dissipate then rapid temperature rise could be seen. This process can also take place if PERM-A-BARRIER[®] Liquid Part A is contaminated with water. During the exotherm process temperatures as high as 290°F (130°C) could be reached and under these conditions the residual water from the PERM-A-BARRIER[®] Liquid Part B will vaporize creating pressure and resulting in a foamy consistency.

Exotherming is most likely to be seen if mixed PERM-A-BARRIER[®] Liquid is left in the pail after mixing. Once mixed, always install the entire contents of the pail as soon as possible. Do not seal containers once mixed with Part B or contaminated with water. Sealed containers may explode due to pressure from the reaction.

It is also possible that exotherming could occur on the substrate if PERM-A-BARRIER[®] Liquid is applied too thickly in a single application. The thickness at which the exotherm will occur depends upon PERM-A-BARRIER[®] Liquid ambient temperature. The following guide summarizes when exotherm is likely to occur. If it is necessary to apply PERM-A-BARRIER[®] Liquid at thicknesses greater than those given below then the membrane should be applied in more than one layer, leaving a minimum of one hour between applications.

AMBIENT TEMPERATURE

40°F (5°C)

70°F (21°C)

100°F (38°C)

Greater than 0.5 in. (12.5 mm)

Occurs at 0.5 in. (12.5 mm)

Occurs at 0.25 in. (6.25 mm)

Areas of sponginess due to exotherming should be repaired by cutting away the affected area to solid, fully adhered, correct thickness membrane.

The exposed area should then be patched with PERM-A-BARRIER[®] Liquid to give a minimum overlap of 6 in (150 mm) onto the existing membrane. Where the surrounding area of PERM-A-BARRIER[®] Liquid is contaminated with dirt or is more than seven days old it should be primed with BITUTHENE[®] Primer B2, PERM-A-BARRIER[®] Liquid Part B or PROCOR[®] Part B.

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