

Suitable Substrates for NobleSeal® Sheet Membranes



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INTERIOR APPLICATIONS:

Concrete

1. Concrete substrates tend to crack, and shrinkage during curing is a primary cause. Concrete can crack for a variety of reasons, but generally, shrinkage cracks occur during the first few months after a slab is poured. NobleSeal sheet membranes can help prevent telegraphing of stress due to cracks and some movement joints through the concrete to thin-set ceramic and stone tile. Concrete should be cured, and moisture and pH levels should be checked to insure that they meet requirements of the bonding agent used as a bond coat for the NobleSeal sheet membrane.
2. For post-tensioned, pre-stressed concrete, NobleSeal sheet membranes can be installed over these slabs in accordance with industry standards. An architect or engineer should confirm that the slab does not deflect under load more than the industry standard (i.e., L/360 for ceramic and L/720 for stone - where L = length of span in inches). Leveling beds may be necessary.

Gypsum Based Concrete/Radiant Heating Systems

(See Technical Data Sheet "NobleSeal® Sheet Membranes over Primed Gypsum Underlayment & Radiant Heat Systems #9")

Radiant heat systems use pipes filled with a heat transfer fluid (e.g., water, propylene glycol).

Radiant systems can be installed in a variety of ways including the following:

1. Embed in concrete.
2. Embed in gypsum concrete.
3. Embed in a mortar bed.

Note: The heat generated can increase stress (and the potential for cracking). NobleSeal sheet membranes relieve the stress caused by the differential movement. The TCNA, MIA, and RPA recommend the use of a crack isolation membrane.

Heating systems that use electric wires are typically embedded in thin-set. NobleSeal sheet membranes can be installed under or over these systems.

Wood Subfloors

Wood subfloors can be problematic for installations of ceramic and stone tile. Wood subfloors can deflect, twist, and move in other ways causing tile to de-bond, crack, etc. NobleSeal sheet membranes can provide a substrate that relieves the stress caused by differential lateral movement and protect thin-set tile from cracking. Some guidelines follow:

1. A variety of wood subfloors with joist spacing of 19.2" and 24" OC are listed in the TCNA Handbook. NobleSeal CIS has been tested in accordance with ASTM C 627 in assemblies described in TCNA Details F 148 and F 152.
2. While CIS was rated for "light commercial" service in both assemblies, we consider these floors the minimum acceptable systems.
3. Generally, NobleBond adhesives should be used to bond NobleSeal to the wood subfloor.
4. NobleSeal sheets cannot accommodate deflection greater than industry standards (e.g., L/360 for ceramic tile).
5. Installations of stone tile require deflection of L/720. Generally, this requires 2 layers of plywood (EGP) with total thickness of 1 1/8".

For details, see MIA guidelines.

EXTERIOR APPLICATIONS:

Noble Deck can provide thin-bed waterproofing and crack isolation for exterior applications, over concrete and suitable plywood substrates covered with suitable tile backer boards or reinforced mortar beds.



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