



Filling in the voids

Volume #14

Self-Leveling Underlayment

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A popular option for topping over prestressed hollow core plank involves the use of a self-leveling underlayment. Some of the most common brand names Gypcrete^{®1}, Level-Right[®], Durock[™] Quik-Top^{™2}, and Ardex-K 15^{®3} work great to create a level surface over the structural hollow core deck. What's seems to be less well understood is the thicknesses to which these products are to be applied depending on the desired result and/or design intent.

One thing we very frequently encounter appears to represent a disconnect between the designers' intent, document notations, and contractor interpretation of both especially concerning thickness. Unlike structural concrete topping, for which there is a definite minimum thickness measured at center span, such a requirement is rarely as stringent for a leveling course; however, in the contractors' defense, it can be noted that way (somewhat confusingly in our opinion) in contract documents. It might surprise you to learn that the minimum manufacturers thickness for these products can range from ½ inch down to featheredge. The ¾ inch common rule of thumb, which was frequently a suggested average thickness when these products were first introduced, has morphed into a minimum somehow likely as a result of bleed over from structural topping notes.

Assuming that the intent of the self-leveling course is solely to cover inherent surface variations, one might wonder why any thickness at all is mentioned in plans or specs, particularly given the range of minimum thicknesses allowed by the different underlayment product manufacturers? It seems like leaving thickness info off, or perhaps better yet calling out a range, would give some latitude and encourage contractors to investigate the quoted material a bit more. The mixed combination of hollow core spans on many projects and the resulting range of camber measurements would further reinforce the idea that a self-leveler thickness range might be a better call, particularly since the use of a leveling course seems to have completely eclipsed the number of decks previously tolerating bare slabs.

If you, as the designer, are trying to gain more than just leveling with an underlayment (to reduce sound transmission for instance), we still think a range would be the best specification though perhaps in thicker increments.

We'd be glad to help you in any way to explore options for your next project.

¹Gypcrete[®] and Level-Right[®] products of Maxxon[®] Corporation

²Durock[™] Quik-Top[™] product of USG Corporation

³Ardex-K 15[®] product of ARDEX Group