



Tiles & Stone Installation Systems • Floor Covering Installation Systems

Using SLUs on high-moisture concrete

Based on extensive testing and real-world experience, MAPEI is now extending the use of all of its cement-based self-leveling underlayments (SLUs)¹ to high-moisture-content concrete slabs for the following conditions:

- Above-grade concrete substrates: ≤ 15 lbs. (6.80 kg) moisture vapor emission rate (MVER) per ASTM F1869 and $\leq 99\%$ relative humidity (RH) per ASTM F2170
- On-grade concrete substrates constructed according to the guidelines outlined in ASTM F710 and ACI 302.2R-06, which require the placement of an impervious vapor retarder under the concrete slab in contact with the earth: ≤ 15 lbs. (6.80 kg) MVER and $\leq 99\%$ RH
- On-grade concrete substrates with no known impervious moisture barrier in place under the concrete slab: ≤ 8 lbs. (3.63 kg) MVER and 90% RH
 - Concrete slabs with no known impervious moisture barrier in place under the concrete should be treated with a moisture-reduction barrier such as *Planiseal® PMB*, *Planiseal VS*, *Planiseal VS Fast* or *Mapeguard® UM* per restrictions detailed in respective Technical Data Sheets before installation of a primer/self-leveling solution. Alternately, *Ultraplan® Extreme 2* can be utilized as the only leveling solution.
- Below-grade concrete substrates with or without a known moisture barrier in place under concrete slab: ≤ 5 lbs. (2.27 kg) MVER and 80% RH. It is recommended to always treat below-grade concrete slabs with an epoxy moisture-reduction barrier such as *Planiseal VS* or *Planiseal VS Fast* or an application of *Mapeguard UM* before the installation of a primer/self-leveling solution as applicable.

The only exception to these conditions is to use *Ultraplan Extreme 2*, which can be applied on a properly prepared concrete slab with moisture levels equal to or up to 25 lbs. (11.3 kg) MVER and 100% RH.

This Recommendation Bulletin is based on the mix water present in new or green concrete. It is not intended to allow high moisture content due to flooding, leaks, hydrostatic pressure or other sources of moisture. Moisture in the concrete slab should be diminishing or stable. Prolonged exposure to moisture that exceeds the conditions outlined above can also lead to performance degradation of the leveling compound.

For the gypsum self-leveling underlayment *Planitex SLF*, the moisture levels of the concrete slab cannot exceed 5 lbs. (2.27 kg) MVER and 80% RH for on-grade or above-grade conditions only. *Planitex SLF* is never recommended for use below grade.

¹ Cement-based self-leveling underlayments include Novoplan® Easy Plus, Novoplan 2 Plus, Novoplan HFL, Novoplan DPL, Ultraplan 1 Plus, Ultraplan Easy and Ultraplan M20 Plus.

