

## NEW ANSI STANDARDS FOR THIN-SET MORTARS

Some significant changes will be occurring with the ANSI industry standards for thin set mortars. The new improvements will make it easier for specifiers to clearly identify which performance parameters are required for a specific application and then to clearly specify the appropriate mortar for that project. In 2013 the following changes will go into effect:

### ANSI A118.1 Standard Dry-Set Cement Mortar

Note that the title no longer contains the words portland cement. This change shifts the focus of the standard to the physical properties of the thin set mortar and not its composition. Additional mortar attributes are now included within the standard as follows:

Thin set mortars that exhibit extended working time will carry the designation “E” (e.g. ANSI A118.1E)

Thin set mortars that exhibit fast setting attributes will carry the designation “F” (e.g. ANSI A118.1F)

Thin set mortars that exhibit non-sag performance on vertical applications will carry the designation “T” (e.g. ANSI A118.1T)

### ANSI A118.4 Modified Dry Set Cement Mortar

Note that the title no longer contains the words latex and portland cement. This change also shifts the focus of the standard to the physical properties of the thin set mortar and not its composition.

Additional mortar attributes are now included within the standard as follows:

Thin set mortars that exhibit extended working time will carry the designation “E” (e.g. ANSI A118.4E)

Thin set mortars that exhibit fast setting attributes will carry the designation “F” (e.g. ANSI A118.4F)

Thin set mortars that exhibit non-sag performance on vertical applications will carry the designation “T” (e.g. ANSI A118.4T)

Changes for ANSI A118.4: The easiest way to break down the changes is into two categories: what parts of the standard have been removed and what parts were added:

Removed
Measurement of the initial set
Measurement of adjustability
48 hour cure – glazed wall tile shear
28 day cure – glazed wall tile shear
12 week wall tile shear strength >300psi
12 week impervious tile shear strength >200psi
7 day quarry tile to quarry tile shear strength
12 week quarry tile to quarry tile shear strength
Added
<u>ISO 13007 4.1</u>
Open time normal > 0.5MPa at 20 minutes
Extended open time > 0.5MPa at 30 minutes
Optional ISO 130074.2 Slip <0.5mm
1 day impervious tile shear strength >75psi

## ANSI A118.15 Improved Modified Dry-Set Cement Mortar

Over the past few decades, ANSI A118.4 compliant thin set mortars have continued to expand. Since there are now a wide range of applications and features of ANSI A118.4 mortars, the need to distinguish standard performing mortars from high performing mortars became necessary. Thus came the birth of a new standard that will be known as “Improved Modified Dry-Set Cement Mortar – ANSI A118.15” which provides another level of classification for thin set mortars. Targets for this type of mortar include large format tiles, glass tile, submerged applications and exterior veneers. Specifiers can now utilize this new standard to clearly indicate the fact that a project or application may need a higher performing mortar. In the past, ANSI A118.4 compliant thin set mortars had a wide array of performance features, including just meeting the minimum performance criteria, which may have been suitable in some cases, but not appropriate for the most demanding tile installations.

The main distinguishing feature between the two categories of mortar is in the 28 day shear bond strength requirements as follows:

ANSI A118.15	ANSI A118.4
28 day Glazed Wall Tile - > 450 psi	28 day Glazed Wall Tile - > 300 psi
28 day Porcelain Mosaic Tile - > 400 psi	28 day Porcelain Mosaic Tile - > 200 psi
28 day Quarry Tile - > 150 psi	28 day Porcelain Mosaic Tile - > 150 psi