

# CUSTOM ANNOUNCES NEW STANDARDS FOR THIN-SET MORTARS

By Steve Taylor

The Tile Council of North America (TCNA) recently approved major changes to the ANSI standards for thin-set mortars used for the installation of ceramic and natural stone tile. For quite some time, National Tile Contractors Association (NTCA) members and many architects have asked for help in differentiating the growing number of thin-set mortars on the market, and now they have it. These highly anticipated improvements to the ANSI standards for thin-set mortars will make it easier to find the right product for every installation. Custom® Building Products has products that meet, and in many cases exceed, the criteria of these newly revised standards.

Materials & Methods Standards Association (MMSA) members worked on every detail of the ANSI standards that define the thin-set mortars used to install nearly all of the tile in North America today. They examined all of the test methods and performance standards to ensure that they are relevant to current tile trends and installation methods. The new, revised and improved standards are the culmination of years of work by MMSA and will help the tile installer and architect/spec writer select the appropriate thin-set mortar for the particular job they have ahead.

ANSI A118.1 and A118.4 have been revised with new test methods. To identify the higher performing polymer-modified thin-set mortars that were traditionally included in ANSI A118.4, a new standard has been created: A118.15. Besides updating the current test methods and requirements, additional mortar attributes have been defined and added to assist selection. It will now be easy to identify thin-set mortars with non-sag, rapid setting or extended working time properties.

**ANSI A118.1 Standard Dry-Set Cement Mortar** no longer contains the label Portland cement in the title. One of the goals of the MMSA committee was to remove references to the mortar's composition and focus on the physical properties of the thin-set mortar. Technology has changed the way thin-set mortars are formulated, and defining the composition is less relevant to achieving the physical performance. The test methods in A118.1 have been revised to more accurately reflect the way tiles are installed in the field, and the methods more closely measure the performance that tile will experience in the field.

In addition to the standard required Open Time of a thin-set mortar, thin-sets that exhibit extended working time will now be recognized and labeled with an E (i.e. A118.1E). Fast-setting thin-set mortars that achieve shear bond strength of 50 psi or more in 4 hours will now be labeled with an F (i.e. A118.1F). Mortars that have non-sag properties on vertical surfaces will be labeled with a T (i.e. A118.1T). The use of the letters will help the specifier and installer quickly and more completely identify the appropriate thin-set mortar for an application.

**ANSI A118.4 Modified Dry-Set Cement Mortar**, no longer contains the label "Polymer". As with ANSI A118.1, references to the composition were removed from the title so that the standard could focus on the physical properties of the thin-set mortar and not on its composition. Thin-set mortars that meet this requirement must have the same shear bond strength as before and one can expect the same performance that they have seen in the past from the standard polymer-modified thin-set mortars. As with ANSI A118.1, letter designations have been added to identify thin-set mortars with added attributes: extended open time (E), fast setting (F), and non-sag characteristics (T). While this information about the performance of the mortar has generally been stated in the manufacturer's literature, now it is identified in one common place: the ANSI standards.

For years, manufacturers have improved the performance of ANSI A118.4 mortars without a means to identify and communicate the improvement. Since there was only one standard for polymer-modified thin-set mortars, it was hard to compare mortars based only on manufacturers' claims. Generally, the manufacturer pointed to the shear bond strength of the mortar listed in the table of physical properties and indicated which was better due to its higher value. MMSA looked for a way to acknowledge and quantify these improved performance thin-set mortars and thus created a new standard: **ANSI A118.15 Improved Modified Dry-Set Cement Mortar**. ANSI A118.15 recognizes mortars that exhibit higher shear bond strength in all installation situations. For instance, the 28-day shear bond to impervious tile requirement for a standard A118.4 thin-set mortar is 200 psi, while the ANSI A118.15 standard for improved thin-sets is 400 psi. As with A118.1 and A118.4 thin-set mortar standards, additional attributes are identified with a letter suffix — extended open time (E), fast-setting (F), and non-sag characteristics (T).



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CUSTOM® has experts in the field who can help explain all of the changes and how to select the appropriate CUSTOM® brand thin-set mortar for your tile project. Additionally, CUSTOM® has several thin-set mortars that meet these standards, which are designed for medium bed applications too. These mortars can be used in situations requiring up to 3/4-inch mortar thickness for proper tile installation. CUSTOM®'s medium bed mortars are perfect for the installation of Large Format Tile, including the new thin, large format panels that are as thin as 3 mm.

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