

TECHNICAL BULLETIN

December, 2012

[A118.1, A118.4 & A118.15](#)

Effective 2013 the American National Standards Institute (ANSI) will offer three (3) performance classifications for Portland Cement Mortars; A118.1, A118.4 and A118.15. With three new performance classifications, the Tile and Stone Industry now has separate and distinct performance specifications. Used in conjunction with the ISO 13007 Performance Standard, architects, installers and owners can select the level of performance that meet the jobsite installation needs. Optional performance specifications; A118.11 -Specification for EGP (Exterior Glue Plywood), A118.12 - Specification for Isolation Membranes for Thin-Set Ceramic Tile and dimensional Stone, and A118.13 - Specification for Bonded Sound Reduction Membranes for Thin-Set Ceramic Tile Installation, have not changed and remain in effect.

PERFORMANCE CLASSIFICATIONS

“Good” A118.1 American National Standard Specifications for Standard Dry-Set Cement Mortar

“Better” A118.4 American National Standard Specifications for Modified Dry-Set Cement Mortar

“Best” A118.15 American National Standard Specifications for Improved Modified Dry-Set Cement Mortar

PERFORMANCE SPECIFICATIONS

		ANSI 118.1	ANSI 118.4	ANSI 118.15
Property	Test Duration and/or Conditions	Standard Dry-Set Cement Mortar	Modified Dry-Set Cement Mortar	Improved Modified Dry-Set Cement Mortar
Extended Open Time (E)*	20 minutes at 28 days 30 minutes at 28 days	>75 psi >75 psi	≥75 psi ≥75 psi	≥75 psi ≥75 psi
Glazed Tile Shear Strength	7 day dry 7 day water immersion 28 day heat aging	>200 psi >150 psi n/a	>300 psi >200 psi n/a	>450 psi >250 psi >450 psi
Impervious Mosaic (Porcelain) Tile Shear Strength	1 day 7 day dry 28 day dry 7 day water immersion 28 day w/freeze-thaw cycling 28 day heat aging 12 weeks	>50 psi >150 psi >150 psi >100 psi n/a n/a >150 psi	>75 psi >200 psi >200 psi >150 psi >175 psi n/a >200 psi	>100 psi >350 psi >400 psi >200 psi >250 psi >400 psi n/a
Quarry Tile Shear Strength	28 day 28 day w/freeze-thaw cycling	n/a n/a	>150 psi >100 psi	>150 psi >100 psi
Final Set (F)*		< 4 hours	< 4 hours	< 4 hours
Sag (T)*		≤0.02 in	≤0.02 in	≤0.02 in

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

*Optional Performance Characteristic

118.1 “Good” **New Additions or Changes**

- Re-titled: American National Standard Specification for Standard Dry-Set Cement Mortar A118.1
- Section 2.0 Tile Definitions: Type C tile name changed to “un-cut unglazed impervious porcelain mosaic from “modular”
- Section 2.0 Tile Definitions: Porcelain Mosaic tile name replaces Impervious Mosaic
- Section 3.0 New Performance Requirements Table Added – All shear values remain the same
- Section 5.2 Set Time: Vicat replace Gilmore
- Section 5.2 Final Set: Fast setting mortars only
- Section 5.3 Open time: Improved test method over concrete
- Section 6.0 Sag on Vertical Surfaces: Improved test method
- Section 7.2 Porcelain Mosaic Tile Shear: Added 1d dry

Deletions (2010 Printing)

- Section 4.5 Adjustability test: Deleted
- Section 5.1 Glazed Wall Tile Shear: 4 week dry & 12 week dry
- Section 5.3 Quarry Tile Shear: 7d dry, 4 week dry & 12 week dry
- Section 6.0 Additional Requirements: Deleted

118.4 “Better” **New Additions or Changes**

- Re-titled: American National Standard Specification for **Modified** Dry-Set Cement Mortar A118.4
- Change reference from “latex” to “modified”. Products will be based on performance rather than chemistry
- Section 2.0 Tile Definitions: Type C tile name changed to “un-cut unglazed impervious porcelain mosaic from “modular”
- Section 2.0 Tile Definitions: Porcelain Mosaic tile name replaces Impervious Mosaic
- Section 3.0 New Performance Requirement Table Added – **All shear values remain the same**
- Section 5.2 Set Time: Vicat replaces Gilmore
- Section 5.2 Final Set: Fast setting mortars only
- Section 5.3 Open time: Improved test method over concrete
- Section 6.0 Sag on Vertical Surfaces: Improved test method
- Section 7.1 Glazed Wall Tile Shear: Delete 48h and 28d dry
- Section 7.2 Porcelain Mosaic Tile Shear: Added 1 d dry

Deletions (2010 Printing)

- Section 4.5 Adjustability test: Deleted
- Section 6.0 Compressive test: Deleted

118.15 “Best” **New Additions**

- Titled: American National Standard Specification for Improved Modified Dry Set Cement Mortar A118.5
- Includes all ANSI A118.4 test methods
- Section 3.0 New Performance Requirements Table – Shear Values higher than 118.4
- Section 7.1 Glazed Wall Tile Shear: Added 28d heat aging strength
- Section 7.2 Porcelain Mosaic Tile Shear: Added 28d heat aging strength