



04 DIVISION  
MORTAR

## ADHERED VENEER MORTARS PRODUCT SELECTION GUIDE



*Selecting the best mortar for the application is critical for getting optimal performance from your masonry adhered veneer system.*



# SPEC MIX® PROVIDES PRODUCT PERFORMANCE SOLUTIONS FOR YOUR MASONRY ADHERED VENEER SYSTEM

When the specification calls for thin veneer masonry installed on the exterior or interior of the building, the SPEC MIX® line of Adhered Veneer Masonry Mortars is the solution. SPEC MIX ADHERED VENEER MORTAR and POLYMER MODIFIED ADHERED VENEER MORTAR are designed for thick bed applications to be used as a scratch coat, bond coat and jointing mortars. For thin bonding applications, THIN VENEER ADHESION MORTAR XP400 and THIN VENEER ADHESION MORTAR XP500 provide the maximum performance with extended warranty systems.

Regardless of the application, SPEC MIX product formulations are designed with the installer in mind. Meeting specifications and standards is a necessity— at SPEC MIX delivering a mason friendly mix for easy installation, higher productivity and maximum profitability is our promise! Choosing from our line of adhered veneer products locks in quality assurance and performance.



COLORED AVM USED IN JOINT GROUT APPLICATION

## ADHERED VENEER MASONRY MORTAR SELECTION CHART

| PRODUCTS                                        | ADHERED VENEER MORTAR | POLYMER MODIFIED ADHERED VENEER MORTAR | THIN VENEER ADHESION MORTAR XP400 | THIN VENEER ADHESION MORTAR XP500 |
|-------------------------------------------------|-----------------------|----------------------------------------|-----------------------------------|-----------------------------------|
| SUBSTRATE                                       |                       |                                        |                                   |                                   |
| Lath over stud (wood/metal)                     | ●                     | ●                                      | ●                                 | ●                                 |
| Concrete masonry unit                           |                       | ●                                      | ●                                 | ●                                 |
| Properly prepared concrete                      |                       | ●                                      | ●                                 | ●                                 |
| Cement board                                    |                       |                                        | ●                                 | ●                                 |
| Cement Board with AWB                           |                       |                                        | ●                                 | ●                                 |
| APPLICATION                                     |                       |                                        |                                   |                                   |
| 3/8 in (9.5 mm) +/- Scratch coat over lath      | ●                     | ●                                      |                                   |                                   |
| 3/8 in (9.5 mm) +/- Bond coat over scratch coat | ●                     | ●                                      |                                   |                                   |
| 1/8 in (3.2 mm) to 1/4 in (6.3 mm) Bond coat    |                       |                                        | ●                                 | ●                                 |
| Joint grout                                     | ●                     | ●                                      |                                   |                                   |
| THIN MASONRY UNIT TYPE (BONDING MATERIAL)       |                       |                                        |                                   |                                   |
| Lightweight manufactured concrete               | ●                     | ●                                      | ●                                 | ●                                 |
| Thin cut natural stone                          |                       | ●                                      | ●                                 | ●                                 |
| Thin brick                                      |                       | ●                                      | ●                                 | ●                                 |
| APPLICABLE STANDARDS                            |                       |                                        |                                   |                                   |
| ASTM C270                                       | ●                     | ●                                      | ●                                 | ●                                 |
| TMS 402/602 (ASTM C482)                         | ●                     | ●                                      | ●                                 | ●                                 |
| ANSI A118.4                                     |                       | ●                                      | ●                                 | ●                                 |
| ANSI A118.15                                    |                       |                                        |                                   | ●                                 |
| PRODUCT WARRANTY                                |                       |                                        |                                   |                                   |
| Over Stud Construction                          | 1 YEAR LIMITED        | 1 YEAR LIMITED                         | 3 YEAR LIMITED                    | 15 YEAR LIMITED                   |
| Over Concrete or Concrete Masonry               | 1 YEAR LIMITED        | 1 YEAR LIMITED                         | 5 YEAR LIMITED                    | 25 YEAR LIMITED                   |

*The SPEC MIX line of adhered veneer masonry mortars are engineered for masons to deliver optimal boardlife, anti-slip adhesion, and extended working times, critical for high productivity, and profitability!*



THICK BED APPLICATIONS

## ADHERED VENEER MORTAR (AVM)



AVM USED WITH MANUFACTURED STONE FOR BOND COAT APPLICATION

## THE VERSATILE, DURABLE ADHERED VENEER MORTAR.

**SPEC MIX Adhered Veneer Mortar (AVM)** is specially formulated as a thick bed mortar for bonding lightweight manufactured thin veneer masonry units over wood frame and steel stud construction. It contains an optimal blend of dry cementitious materials, masonry sand, and performance enhancing admixtures specifically designed for use as a scratch coat, bond coat, and joint grout, for thin veneer masonry systems. It is formulated as a cohesive material with consistent workability, anti-sag formulation, high water retention, and excellent bond strength, meeting ASTM C270 standards. AVM is not designed to be used in cement board installations. The final wall system will produce a non-load bearing, aesthetically pleasing exterior veneer, or interior finish ideal for residential construction.

SPEC MIX AVM is designed to be compatible with the characteristics of most thin masonry veneer units. Packaged in 80 (36.2 kg) and 3,000 lb (1,360.7 kg) bags, AVM is available in SPEC MIX standard colors and custom colors for joint grouting the masonry veneer system.

### ADHERED VENEER MORTAR (AVM) PERFORMANCE STANDARDS

| TEST                        | SPECIFICATION | SPECIFICATION REQUIREMENTS | SPEC MIX AVM (Typical Results) |
|-----------------------------|---------------|----------------------------|--------------------------------|
| <b>Ceramic Tile</b>         |               |                            |                                |
| At 28 Days                  | ASTM C482     | > 50 PSI (0.3 MPa)         | > 100 PSI (0.7 MPa)            |
| <b>Compressive Strength</b> |               |                            |                                |
| At 28 Days                  | ASTM C270     | > 1800 PSI (12.4 MPa)      | > 1800 PSI (12.4 MPa)          |



AVAILABLE  
IN COLOR



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## THICK BED APPLICATIONS

# POLYMER MODIFIED ADHERED VENEER MORTAR (PMAVM)



PMAVM APPLIED TO NATURAL THIN STONE FOR BOND COAT APPLICATION TO CONCRETE

## POLYMER MODIFIED FOR INCREASED PERFORMANCE.

**SPEC MIX Polymer Modified Adhered Veneer Mortar (PMAVM)** is a technologically advanced polymer modified thick bed adhered veneer mortar for use as a scratch coat, bond coat and joint grout for manufactured stone veneer, natural thin cut stone and thin brick. PMAVM can be used in traditional lath installations and is specifically recommended when thick bed applications are required over properly prepared concrete and concrete masonry surfaces. PMAVM is not designed to be used in cement board installations. PMAVM exceeds ASTM C270 and ANSI A118.4 material standards. PMAVM is the ideal solution for owners, architects, and contractors, that demand a low-sag thick bed mortar with great working time that speeds up installation and productivity. The anti-slip properties of PMAVM make the installation of large natural thin cut stone easy while holding units in place for an extended time.



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## POLYMER MODIFIED ADHERED VENEER MORTAR (PMAVM) PERFORMANCE STANDARDS

| TEST                                | SPECIFICATION | SPECIFICATION REQUIREMENTS                       | SPEC MIX PMAVM<br>(Typical Results) |
|-------------------------------------|---------------|--------------------------------------------------|-------------------------------------|
| Porcelain Mosaic Tile               |               |                                                  |                                     |
| At 1 Day                            | ANSI A118.4   | > 75 PSI (0.5 MPa)                               | > 100 PSI (0.7 MPa)                 |
| At 7 Days                           |               | > 200 PSI (1.3 MPa)                              | > 225 PSI (1.6 MPa)                 |
| At 7 Days Water Immersed            |               | > 150 PSI (1.0 MPa)                              | > 175 PSI (1.2 MPa)                 |
| At 28 Days                          |               | > 200 PSI (1.3 MPa)                              | >300 PSI (2.0 MPa)                  |
| At 28 Days with Freeze/Thaw Cycling |               | > 175 PSI (1.2 MPa)                              | > 200 PSI (1.3 MPa)                 |
| At 12 Weeks                         |               | > 200 PSI (1.3 MPa)                              | > 350 PSI (2.4 MPa)                 |
| Quarry Tile                         |               |                                                  |                                     |
| At 28 Days                          | ANSI A118.4   | > 150 PSI (1.0 MPa)                              | > 200 PSI (1.3 MPa)                 |
| At 28 Days with Freeze/Thaw Cycling |               | > 100 PSI (0.7 MPa)                              | > 125 PSI (0.9 MPa)                 |
| Glazed Wall Tile                    |               |                                                  |                                     |
| At 7 Days                           | ANSI A118.4   | > 300 PSI (2.0 MPa)                              | > 325 PSI (2.2 MPa)                 |
| At 7 Days Water Immersed            |               | > 200 PSI (1.3 MPa)                              | > 225 PSI (1.6 MPa)                 |
| Plastic Properties                  |               |                                                  |                                     |
| Sag Resistance at 20 Minutes        | ANSI A118.4   | ≥ 0.02 in (0.5 mm)                               | ≥ 0.02 in (0.5 mm)                  |
| Open Time                           |               | 20 Min. Set Time<br>≥ 75 PSI (0.5 MPa) @ 28 Days |                                     |
| Ceramic Tile                        |               |                                                  |                                     |
| At 28 Days                          | ASTM C482     | > 50 PSI (0.3 MPa)                               | > 200 PSI (1.3 MPa)                 |
| Compressive Strength                |               |                                                  |                                     |
| At 28 Days                          | ASTM C270     | > 1800 PSI (12.4 MPa)                            | > 1800 PSI (12.4 MPa)               |

## THIN BONDING APPLICATIONS

# THIN VENEER ADHESION MORTAR XP400



## LOW SAG, HIGH BOND ADHESIVE MORTAR!

### THIN VENEER ADHESION MORTAR XP400 PERFORMANCE STANDARDS

| TEST                                | SPECIFICATION | SPECIFICATION REQUIREMENTS                       | SPEC MIX XP400<br><i>(Typical Results)</i> |
|-------------------------------------|---------------|--------------------------------------------------|--------------------------------------------|
| Porcelain Mosaic Tile               |               |                                                  |                                            |
| At 1 Day                            | ANSI A118.4   | > 75 PSI (0.5 MPa)                               | > 150 PSI (1.0 MPa)                        |
| At 7 Days                           |               | > 200 PSI (1.3 MPa)                              | > 250 PSI (1.7 MPa)                        |
| At 7 Days Water Immersed            |               | > 150 PSI (1.0 MPa)                              | > 200 PSI (1.3 MPa)                        |
| At 28 Days                          |               | > 200 PSI (1.3 MPa)                              | > 350 PSI (2.4 MPa)                        |
| At 28 Days with Freeze/Thaw Cycling |               | > 175 PSI (1.2 MPa)                              | > 200 PSI (1.3 MPa)                        |
| At 12 Weeks                         |               | > 200 PSI (1.3 MPa)                              | > 400 PSI (2.7 MPa)                        |
| Quarry Tile                         |               |                                                  |                                            |
| At 28 Days                          | ANSI A118.4   | > 150 PSI (1.0 MPa)                              | > 200 PSI (1.3 MPa)                        |
| At 28 Days with Freeze/Thaw Cycling |               | > 100 PSI (0.7 MPa)                              | > 150 PSI (1.0 MPa)                        |
| Glazed Wall Tile                    |               |                                                  |                                            |
| At 7 Days                           | ANSI A118.4   | > 300 PSI (2.0 MPa)                              | > 350 PSI (2.4 MPa)                        |
| At 7 Days Water Immersed            |               | > 200 PSI (1.3 MPa)                              | > 250 PSI (1.7 MPa)                        |
| Plastic Properties                  |               |                                                  |                                            |
| Sag Resistance at 20 Minutes        | ANSI A118.4   | ≥ 0.02 in (0.5 mm)                               | ≥ 0.02 in (0.5 mm)                         |
| Open Time                           |               | 20 Min. Set Time<br>≥ 75 PSI (0.5 MPa) @ 28 Days |                                            |
| Ceramic Tile                        |               |                                                  |                                            |
| At 28 Days                          | ASTM C482     | > 50 PSI (0.3 MPa)                               | > 250 PSI (1.7 MPa)                        |

SPEC MIX Thin Veneer Adhesion Mortar XP400 is a premium preblended polymer modified thin set mortar specifically designed to bond masonry thin veneer units including manufactured and gauged or ungauged natural thin stone and thin brick to substrates for interior and exterior thin bonding applications. Its innovative, anti-sag formulation, and optimized sand gradation, provide superior workability, adhesion, and durability, crucial to the application. XP400 exceeds ANSI A118.4 standards and carries a 3 to 5 year extended warranty.

SPEC MIX XP400 should not be used in a scratch coat over lath or joint grouting applications. XP400 comes packaged in 50 lb. (22.6 kg) bags.

XP400 is the masonry veneer adhesive formulated to meet ANSI A118.4 standards. **Backed by 3 & 5 year warranties** and preferred by masons, XP400 is the mix with exceptional workability and bond strength.



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## THIN BONDING APPLICATIONS

# THIN VENEER ADHESION MORTAR XP500

## THE MIX WITH EXTREME BOARDLIFE AND BOND

**SPEC MIX Thin Veneer Adhesion Mortar XP500** is a premium preblended polymer modified thin set mortar specifically designed to bond masonry thin veneer units including manufactured, and gauged, or ungauged natural thin stone, and thin brick, to substrates for interior and exterior thin bonding applications. Its innovative, anti-sag formulation, and optimized sand gradation, provide superior workability, adhesion, and durability, crucial to the application. XP500 exceeds ANSI A118.15 standards and carries a 15 to 25 year extended warranty.



XP500 ADHESION MORTAR WITH NATURAL THIN STONE FOR BOND COAT APPLICATION

SPEC MIX XP500 should not be used in a scratch coat over lath or a joint grout application. XP500 comes packaged in 50 lb (22.6 kg) bags. It exceeds ANSI A118.4 and ANSI A118.15 applicable requirements as well as TMS 402/602 Building Code Requirements and Specification for Masonry Structures shear strength requirements when tested in accordance with ASTM C482. Project submittals are available upon request; data sheet and SDS is available at [www.specmix.com](http://www.specmix.com).

### APPLICATION & SUBSTRATES

- Interior and exterior thin veneer installations
- Hardened brown coat
- Concrete (properly prepared and free of curing compounds)
- Concrete masonry units
- Cement backer boards



## THIN VENEER ADHESION MORTAR XP500 PERFORMANCE STANDARDS

| TEST                                | SPECIFICATION | SPECIFICATION REQUIREMENTS                       | SPEC MIX XP500<br>(Typical Results) |
|-------------------------------------|---------------|--------------------------------------------------|-------------------------------------|
| Porcelain Mosaic Tile               |               |                                                  |                                     |
| At 1 Day                            | ANSI A118.15  | > 100 PSI (0.7 MPa)                              | > 200 PSI (1.3 MPa)                 |
| At 7 Days                           |               | > 300 PSI (2.0 MPa)                              | > 400 PSI (2.7 MPa)                 |
| At 7 Days Water Immersed            |               | > 200 PSI (1.3 MPa)                              | > 300 PSI (2.0 MPa)                 |
| At 28 Days                          |               | > 400 PSI (2.7 MPa)                              | > 500 PSI (3.4 MPa)                 |
| At 28 Days with Freeze/Thaw Cycling |               | > 250 PSI (1.7 MPa)                              | > 350 PSI (2.4 MPa)                 |
| At 28 Days Heat Aging               |               | > 400 PSI (2.7 MPa)                              | > 500 PSI (3.4 MPa)                 |
| Quarry Tile                         |               |                                                  |                                     |
| At 28 Days                          | ANSI A118.15  | > 150 PSI (1.0 MPa)                              | > 250 PSI (1.7 MPa)                 |
| At 28 Days with Freeze/Thaw Cycling |               | > 100 PSI (0.7 MPa)                              | > 200 PSI (1.3 MPa)                 |
| Glazed Wall Tile                    |               |                                                  |                                     |
| At 7 Days                           | ANSI A118.15  | > 450 PSI (3.1 MPa)                              | > 500 PSI (3.4 MPa)                 |
| At 7 Days Water Immersed            |               | > 250 PSI (1.7 MPa)                              | > 350 PSI (2.4 MPa)                 |
| Plastic Properties                  |               |                                                  |                                     |
| Sag Resistance at 20 Minutes        | ANSI A118.15  | ≥ 0.02 in (0.5 mm)                               | ≥ 0.02 in (0.5 mm)                  |
| Open Time                           |               | 20 Min. Set Time<br>≥ 75 PSI (0.5 MPa) @ 28 Days |                                     |
| Ceramic Tile                        |               |                                                  |                                     |
| At 28 Days                          | ASTM C482     | > 50 PSI (0.3 MPa)                               | > 300 PSI (2.0 MPa)                 |

XP500 is the masonry veneer adhesive rigorously tested to meet ANSI A118.15 standards. **Backed by 15 & 25 year warranties** and preferred by masons, XP500 is a superior thin masonry adhesive mortar.



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# COVERAGE RATES

## ADHERED VENEER MORTAR

| APPLICATION                               | 80 lb (36.2 kg) Bag                                   | 3,000 lb (1,360.7 kg) Bag                                   |
|-------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|
| Scratch Coat                              | 20 to 23 ft <sup>2</sup> (1.8 to 2.1 m <sup>2</sup> ) | 750 to 860 ft <sup>2</sup> (70 to 80 m <sup>2</sup> )       |
| Bond Coat                                 | 24 to 26 ft <sup>2</sup> (2.2 to 2.4 m <sup>2</sup> ) | 900 to 975 ft <sup>2</sup> (84 to 91 m <sup>2</sup> )       |
| Joint Grout - ½ in (13 mm) Joints         | 38 to 40 ft <sup>2</sup> (3.5 to 3.7 m <sup>2</sup> ) | 1,425 to 1,500 ft <sup>2</sup> (132 to 139 m <sup>2</sup> ) |
| Full Installation (Scratch, Bond & Joint) | 13 to 15 ft <sup>2</sup> (1.2 to 1.4 m <sup>2</sup> ) | 485 to 560 ft <sup>2</sup> (45 to 52 m <sup>2</sup> )       |

## POLYMER MODIFIED ADHERED VENEER MORTAR

| APPLICATION                               | 80 lb (36.2 kg) Bag                                   | 3,000 lb (1,360.7 kg) Bag                                   |
|-------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|
| Scratch Coat                              | 20 to 23 ft <sup>2</sup> (1.8 to 2.1 m <sup>2</sup> ) | 750 to 860 ft <sup>2</sup> (70 to 80 m <sup>2</sup> )       |
| Bond Coat                                 | 24 to 26 ft <sup>2</sup> (2.2 to 2.4 m <sup>2</sup> ) | 900 to 975 ft <sup>2</sup> (84 to 91 m <sup>2</sup> )       |
| Joint Grout - ½ in (13 mm) Joints         | 38 to 40 ft <sup>2</sup> (3.5 to 3.7 m <sup>2</sup> ) | 1,425 to 1,500 ft <sup>2</sup> (132 to 139 m <sup>2</sup> ) |
| Full Installation (Scratch, Bond & Joint) | 13 to 15 ft <sup>2</sup> (1.2 to 1.4 m <sup>2</sup> ) | 485 to 560 ft <sup>2</sup> (45 to 52 m <sup>2</sup> )       |

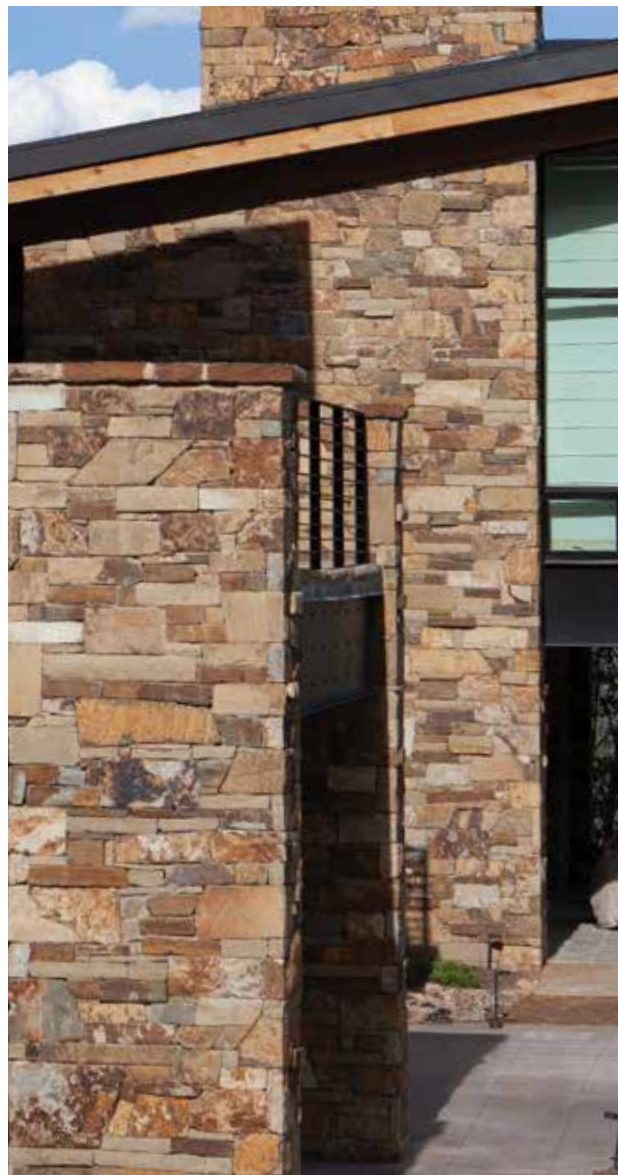
## THIN VENEER ADHESION MORTAR XP400

| APPLICATION                                                  | 50 lb (22.6 kg) Bag                                   |
|--------------------------------------------------------------|-------------------------------------------------------|
| Bond Coat - 1/4 in x 3/8 in (6.3 mm x 9.5 mm) NOTCHED TROWEL | 60 to 70 ft <sup>2</sup> (5.5 to 6.5 m <sup>2</sup> ) |
| Bond Coat - 1/2 in x 1/2 in (13 mm x 13mm) NOTCHED TROWEL    | 40 to 45 ft <sup>2</sup> (3.7 to 4.2 m <sup>2</sup> ) |
| Coating Masonry Unit Method                                  | 30 to 33 ft <sup>2</sup> (2.8 to 3.0 m <sup>2</sup> ) |

## THIN VENEER ADHESION MORTAR XP500

| APPLICATION                                                  | 50 lb (22.6 kg) Bag                                   |
|--------------------------------------------------------------|-------------------------------------------------------|
| Bond Coat - 1/4 in x 3/8 in (6.3 mm x 9.5 mm) NOTCHED TROWEL | 60 to 70 ft <sup>2</sup> (5.5 to 6.5 m <sup>2</sup> ) |
| Bond Coat - 1/2 in x 1/2 in (13 mm x 13mm) NOTCHED TROWEL    | 40 to 45 ft <sup>2</sup> (3.7 to 4.2 m <sup>2</sup> ) |
| Coating Masonry Unit Method                                  | 30 to 33 ft <sup>2</sup> (2.8 to 3.0 m <sup>2</sup> ) |

Note: Coverage is approximate and will vary depending on workmanship, method of installation, substrate, style of stone, waste, and regional variation.



For more information on the installation of masonry veneer systems contact:

## TECHNICAL SUPPORT

CONTACT YOUR LOCAL SPEC MIX MANUFACTURER  
VISIT [WWW.SPECMIX.COM](http://WWW.SPECMIX.COM)



SPEC MIX PRODUCTS ARE PRODUCED BY ITS MANUFACTURING FACILITIES THROUGHOUT THE U.S. AND CANADA. EACH MANUFACTURER ADHERES TO A STRICT QUALITY ASSURANCE PROGRAM TO ENSURE COMPLETE QUALITY CONTROL IN EVERY BATCH.

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