



04 DIVISION  
MORTAR

XP400

THIN VENEER ADHESION MORTAR



#### THIN BONDING APPLICATIONS

### LOW SAG, HIGH BOND ADHESIVE MORTAR!

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 installations. Its innovative, anti-sag formulation and optimized sand gradation provide superior workability, adhesion and durability crucial to the application.

SPEC MIX XP400 is engineered specifically to adhere thin cut natural and manufactured masonry veneer units utilizing performance additives to increase sag resistance to speed installation and increase bond strength to reduce callbacks. SPEC MIX XP400 exceeds ANSI A118.4 and 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 C270 and ASTM C482.

#### TYPICAL MATERIALS

PORTLAND CEMENT  
AGGREGATES  
PERFORMANCE ADMIXTURES



(VM-03)



## THIN VENEER ADHESION MORTAR **XP400**

### MIXING INSTRUCTIONS

When mixing SPEC MIX XP400, use an electric drill with a paddle to ensure homogeneity and good board life.

1. Add each 50 lb (22.6 kg) bag of SPEC MIX Thin Veneer Adhesion Mortar XP400 to 5 to 5.5 quarts (4.7 to 5.2 L) of clean, potable water.
2. Use a 300 to 500 rpm speed 1/2 in (13 mm) drill to achieve a smooth, paste-like consistency.
3. Let the mortar slake or stand for 5 to 10 minutes and then remix prior to use.
4. Stir occasionally during use, but do not add more water.

When properly mixed, troweled ridges will stand without slump.

### INSTALLATION/APPLICATION

All installation assemblies must manage structural and thermal expansion movement, and moisture/water drainage. The finish of the receiving surface when using a thin setting bed adhesive mortar is required to be flat or smooth, clean and open to receive adhered masonry veneers.

SPEC MIX Thin Veneer Adhesion Mortar XP400 is to be applied to the receiving surface with a 3/8 in notched trowel in straight lines and in a thin continuous coat to the back of the thin masonry veneer unit. The coated unit is to be pressed into the notched setting bed to collapse the mortar ridges with ≥95% mortar coverage. Install units before the mortar dries out.

SPEC MIX Adhered Veneer Mortar (AVM) or SPEC MIX Polymer Modified Adhered Veneer Mortar (PMAVM) are acceptable products for scratch, brown coats and joint grout in an adhered veneer system using a thin veneer bonding mortar like XP400. XP400 is only appropriate for use as a thin bonding coat in the thin masonry veneer system.

Additional guidance on surface preparation, installation and application can be found in ASTM C1780, ANSI A108.5, TMS 402/602, ICRI and the CMHA's MSV Installation Guide.

### JOINTING

Joint thin veneer installation with SPEC MIX Polymer Modified Adhered Veneer Mortar or SPEC MIX Adhered Veneer Mortar; both mortars are specifically designed to flow through grout bags for ease of installation and are available in standard or custom colors.

### THIN VENEER ADHESION MORTAR XP400 PERFORMANCE STANDARDS

TEST	SPECIFICATION	SPECIFICATION REQUIREMENTS	SPEC MIX XP400 <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 ≥ 75 PSI (0.5 MPa) @ 28 Days	
Ceramic Tile			
At 28 Days	ASTM C482	> 50 PSI (0.3 MPa) > 250 PSI (1.7 MPa)	

### CLEANING

Clean tools and stone work with water while the SPEC MIX XP400 Mortar is fresh. If XP400 gets on the surface of the units and is allowed to harden on the masonry units, the use of physical abrasion or chemical cleaning may be required for removal. If chemical cleaning is chosen, consult with the manufacturer of a national proprietary masonry cleaning solution company for the most appropriate solution.

### PACKAGE SIZES AND DELIVERY EQUIPMENT

SPEC MIX Thin Veneer Adhesion Mortar XP400 is available in 50 lb (22.6 kg) packages for easy hand loading. Also available in 3,000 lb (1,360.7 kg) reusable bulk bags to be used with the various SPEC MIX silo delivery systems.

### LIMITATIONS

SPEC MIX XP400 should be installed in accordance with the provisions of the local building code and applicable ASTM and ANSI standards. Good workmanship coupled with proper detailing and design assures durable, functional, watertight construction. SPEC MIX XP400 is intended to be used as a cementitious adhesive for bonding thin masonry veneer units to substrates. It should not be used as a

standard mortar in full depth structural masonry construction. Follow proper cold-weather and hot-weather masonry procedures at temperatures below 40 °F (4 °C) or above 100°F (38 °C) respectively.

### NOTICE OF LIMITED WARRANTY

**NOTICE:** Obtain the applicable 3 & 5 year WARRANTIES at [www.specmix.com/product-warranty/xp400](http://www.specmix.com/product-warranty/xp400) or send a written request to SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured under the authority of SPEC MIX, LLC.  
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### WARNING

**IMPORTANT:** Read Safety Data Sheet carefully before using. Wear impervious gloves, such as Nitrile, and eye protection. Warning: may irritate skin and eyes. May be harmful if swallowed. Keep out of reach of children.

### TECHNICAL SUPPORT

- VISIT [WWW.SPECMIX.COM](http://WWW.SPECMIX.COM)
- CONSULT WITH YOUR LOCAL SALES REPRESENTATIVE @ [WWW.SPECMIX.COM/CONTACT-REP/](http://WWW.SPECMIX.COM/CONTACT-REP/)