MIXING INSTRUCTIONS

1. Use a mechanical batch mixer to ensure homogeneity, workability and good board life.
2. Add the minimum amount of clean, potable water for optimum workability.
3. Mix for five minutes consistently from batch to batch.
4. Tool mortar joints when the surface is thumb-print hard. Keep tooling times consistent.
5. Hand mix mortar only with written approval by the specifier who should outline procedures.
6. Use mortar within 2.5 hours after initial mixing.
7. Retemper mortar only when mixing water is lost due to evaporation. Do not retemper colored mortar.
8. Allow mortar to cure a minimum of 7 days but no more than 28 days before cleaning. Consult manufacturer of the masonry units and cleaning chemicals for further instructions to ensure proper washing procedures. Use a mechanical batch mixer to ensure homogeneity, workability and good board life.

   Clean masonry only with a national proprietary cleaning agent (following the manufacturer's instructions) or potable water. SPEC MIX products are custom packaged to the specification. They must be kept dry, covered and protected from weather and other damage.

CONSISTENT COLOR EVERY TIME

Coloring mortar accurately and consistently is only achieved by preblending all mortar constituents and pigments using computer batching systems, while adhering to a specialized process. Over 20 years ago the SPEC MIX organization introduced this technological approach for colored masonry mortars to the construction industry, and it continues to perfect this process. SPEC MIX colored mortar uniformity starts with sourcing high quality, stable pigments that are pre-weighed to ensure the colorant loading meets each specific formulation for our standard and custom colored mortars. Then, all the ingredients are weighed and preblended to achieve a homogeneous mixture. The SPEC MIX standard colored mortar line is a collection of 10 colors that are available in 80 lb. (36.3 kg) and 3,000 lb. (1360.8 kg) bulk bags throughout North America. And, when building owners and designers want a unique color that supports their vision for a project, the options for custom SPEC MIX colored mortars are endless and consistent from batch to batch.

LIMITATIONS

SPEC MIX IWR Mortar should be installed in accordance with the provisions of the local building code and applicable ASTM standards. Good workmanship coupled with proper detailing and design assures durable, functional, watertight construction. Follow proper cold-weather masonry procedures at temperatures below 40° F (5° C).

LIMITED PRODUCT WARRANTY

SPEC MIX®, Inc. warrants this product to be of merchantable quality when used or applied in accordance with the instructions hereon. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is LIMITED to the replacement of its product (as purchased) if found to be defective, or at the shipping company's option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to SPEC MIX®, Inc. in writing at: One Securities Centre, 3490 Piedmont Road, Suite 1300, Atlanta, GA 30305. THIS LIMITED WARRANTY IS ISSUED AND ACCEPTED IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND EXPRESSLY EXCLUDES LIABILITY FOR CONSEQUENTIAL DAMAGES.

WARNING

IMPORTANT! READ BEFORE USING Wear impervious gloves, such as nitrile. This product contains Portland cement. Contact with freshly mixed product can cause severe burns. Avoid direct contact with skin and eyes. If this product should contact eyes, immediately flush with water for at least 15 minutes and consult a physician. For skin exposure, wash promptly with plenty of soap and water. Remove soaked clothing promptly. If this product burns your skin, see a physician immediately. This product may contain silica. Silica dust if inhaled may cause respiratory or other health problems. Prolonged inhalation may cause delayed lung injury, including silicosis and possibly cancer. A N95 approved dust mask, eye protection, and rubber boots and gloves are recommended when using this product. Safety Data Sheets can be viewed online at **www.specmix.com**

KEEP OUT OF REACH OF CHILDREN

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Distributed By:

TECHNICAL SUPPORT

- **CONTACT YOUR LOCAL SPEC MIX® MANUFACTURER**
- **VISIT WWW.SPECMIX.COM**
- **CONTACT SPEC MIX®, INC.**
  PHONE: 888-SPEC-MIX FAX: 888-FAX-SPEC

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.

1230 EAGAN INDUSTRIAL RD, EAGAN, MN 55121

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SPEC MIX®

DIVISION 04
MASONRY PRODUCTS

IWR MORTAR
INTEGRAL WATER REPELLENT MORTAR

TYPE M, S, N

Superior Bond. Highly Durable.

AVAILABLE IN COLOR

- TOTAL QUALITY CONTROL WITH EVERY BAG
- LABORATORY TESTED TO ASSURE BOND & WATER REPELLENCY
- PREBLENDED WITH ADMIXTURE FOR CONSISTENCY
- MORE COST EFFECTIVE THAN LIQUID ADMIXTURES
- GREAT WORKABILITY AND BOARD LIFE
- NO SAND PILES OR WASTED MATERIALS LEFT ON SITE
- AVAILABLE IN STANDARD & CUSTOM COLORS

IWR MORTAR / INTEGRAL WATER REPELL

SUPERIOR BOND. WATER REPELLENT.

SPEC MIX® Integral Water Repellent (IWR) mortar is specially formulated to reduce water penetration, and efflorescence of masonry mortar joints. By incorporating a proprietary, dry polymeric integral water repellent admixture during the SPEC MIX manufacturing process, the designer, specifier, owner and contractor are assured the mortar on their project will repel moisture, while maintaining optimal workability and flexural bond strength. When using ASTM C 1357 “Test Method for Evaluating Masonry Bond Strength” to compare the flexural bond strength of SPEC MIX IWR Mortar to the same reference mortar mixed with the liquid admixtures, SPEC MIX IWR mortar demonstrated a 46 percent increase in bond strength.

SPEC MIX IWR Mortar is a dry, preblended mortar mix that is produced using either Portland cement and hydrated lime, mortar cement or masonry cement with dried masonry sand and a proprietary repellent admixture formulated for water repellency, superior bond, water retention and board life. Available in Types M, S and N, each meets ASTM C 270, ASTM C 1714 and CSA A179 requirements. SPEC MIX IWR Mortar is also available in standard and custom colors.

In addition to custom mix designs that are available for specific applications or properties, the standard IWR Mortar is designed to be compatible with the characteristics of the specified masonry unit. It is acceptable for all types of masonry construction with submittals available upon request. The mortar may be used above or below grade when manufactured to the appropriate specification.

RELIABLE PERFORMACNE. PROVEN DURABILITY.

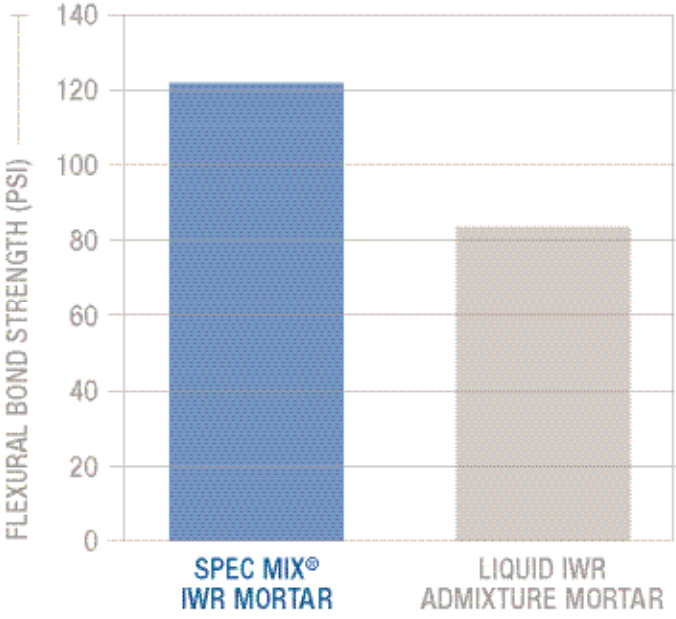
SPEC MIX Integral Water Repellent (IWR) mortar is specially formulated to reduce water penetration, efflorescence of masonry mortar joints while meeting ASTM C 270 and CSA A179 requirements. By incorporating a proprietary, dry integral water repellent admixture during the SPEC MIX manufacturing process, the designer, specifier, owner and contractor are assured the mortar on their project will repel moisture, while maintaining optimal workability and flexural bond strength.

Weighing and blending the dry water repellent admixture during the computer batching process guarantees the consistency and quality assurance of IWR Mortar. The same amount of IWR admixture, as well as the other mortar components, is included in each bag, every time. For the contractor, this eliminates the time associated with measuring and hand-adding materials on site that lower job site efficiency. More importantly, it eliminates the possibility of varying admix dosage rates that effect the integrity and aesthetic value of the masonry structure.

Using SPEC MIX IWR mortar can greatly reduce the potential for problems associated with water penetration of the building envelope. Preblending all dry mortar materials ensures uniformity of the mixture and increases productivity while improving the long-term performance of the wall system. SPEC MIX IWR is THE ultimate solution.

FLEXURAL BOND STRENGTH COMPARISON

SPEC MIX IWR Mortar significantly out-performed Liquid IWR Admixture Mortar in laboratory tests comparing flexural bond strength. The test meets ASTM C 1072 standards and was conducted with an average of 6 prisms Constructed with units treated with a water repellent mixture.



TEST RESULTS OF THE FLEXURAL BOND AND WATER PENETRATION STUDY

- Proved to be as effective and comparable to mortars containing a nationally recognized, proprietary liquid water-repellent admixture.
- Exceeded the flexural bond strength of a similar mortar mixture containing a nationally recognized proprietary liquid water-repellent admixture.
- Provided greater resistances to water penetration than the reference mortar when tested in accordance with ASTM E 514.
- Created a water-repellent masonry assemblage when properly designed and constructed with water repellent treated units.
- The 7 and 28 day compressive strength of the SPEC MIX IWR Mortar was similar to that of the reference mortar.

TYPICAL PERFORMANCE

SPEC MIX IWR Mortar has better water retention and resistance to water penetration than the reference SPEC MIX mortar (Table 1). Type S masonry cement mortar with IWR admixture also exhibits better water penetration resistance and water retention characteristics than the reference mortar (Table 2).

TABLE 1 - EXAMPLE PERFORMANCE PROPERTIES: PORTLAND/LIME/SAND TYPE N MORTAR

ASTM C 270	Reference Type N Mortar	Type N Mortar with IWR Admixture
Water Retention	89%	93%
Air	6.3%	6.1%
7-Day Compressive Strength	1,520 psi	1,570 psi
28-Day Compressive Strength	1,730 psi	1,800 psi
ASTM E 514		
Time of First Dampness	60 min	None
Time of First Visible Water	None	None
Area of Dampness (% of test area)	10%	None
Water Collected in 4 Hours	None	None

MORE COST EFFECTIVE.

TABLE 2 - EXAMPLE PERFORMANCE PROPERTIES: MASONRY CEMENT/SAND TYPE S MORTAR

ASTM C 270	Reference Type S Mortar	Type S Mortar with IWR Admixture
Water Retention	86%	86%
Air	15.8%	15.3%
7-Day Compressive Strength	1,570 psi	1,600 psi
28-Day Compressive Strength	1,950 psi	2,040 psi
ASTM E 514		
Time of First Dampness	38 min	None
Time of First Visible Water	None	None
Area of Dampness (% of test area)	12%	None
Water Collected in 4 Hours	None	None

INSTALLATION/APPLICATION

Mortar type should correlate with the particular masonry unit to be used. The specifier should evaluate the interaction of the mortar type and masonry unit specified. That is, masonry units having a high initial rate of absorption will have greater compatibility with mortar that has a high-water retentivity. The material properties of mortar that influence the structural performance of masonry are compressive strength, bond strength and elasticity. Because the compressive strength of masonry mortar is less important than bond strength, workability and water retentivity, the latter properties should be given principal consideration in mortar selection. Select mortar based on the design requirements and with consideration of code and specification provisions affected by the mortar.

A sample of the proposed product will be provided by the manufacturer for architectural approval and testing, if required. Preparation of this panel with all materials and systems employed in the final project is imperative. Retain the mock-up or field sample through the completion of the project.

100% FACTORY PREBLENDED
NO CHANCE FOR ERROR!