

# TYPE S-P&L TWR (Portland : Lime : Sand : Water Repellent)

### 1. PRODUCT NAME

SPEC MIX® Type S-P&L Mortar-TWR

### 2. MANUFACTURER



#### Packaged Concrete, Inc.

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### 3. PRODUCT DESCRIPTION

#### General

- The material properties of mortar, which influence the structural performance of
- The material properties of mortar which 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. Mortar should be selected based on the design requirements and with due consideration of the MSJC Code and specification provisions affected by the mortar selected.

#### Basic Use

- Type S mortar is recommended for use in reinforced masonry, unreinforced masonry where maximum flexural strength is required, and for use where mortar adhesion is the sole bonding agent between facing and backing.
- Type S is a reasonably high compressive strength mortar which tests indicate has a high tensile bond strength with most brick units.

#### Composition and Materials

- Type I Portland Cement (ASTM C 150) "Standard Specification for Portland Cement"

- Type S Hydrated Lime (ASTM C 207) "Standard Specification for Hydrated Lime for Masonry Purposes"
- Masonry Aggregate (ASTM C 144) "Standard Specification for Aggregate for Masonry Mortar"
- Water Repellent

#### Colored Mortar

- PCI uses only the highest quality pigments available providing the strongest and most stable colors. In order to consistently achieve the desired mortar color, PCI incorporates the pigment into the mortar during the factory blending process. All ratios of the dry components remain constant in every batch.
- Colored mortar is to be discarded two hours after initial mixing.
- Custom matching can be performed to attain a match to a specific sample.
- Do not retemper colored mortar.

### 4. INSTALLATION

#### Mixing

- All cementitious materials and aggregate shall be mixed between 3 and 5 minutes in a mechanical batch mixer with the maximum amount of water to produce a workable consistency.
- Hand mixing of the mortar is permitted with the written approval of the specifier outlining hand-mixing procedures.

#### Average Coverage

Unit Size . . . . .	Units/3000#
Standard Brick . . . . .	1550
Queen Sized Brick . . . . .	1315
King Sized Brick . . . . .	1160
Utility Brick . . . . .	1000
4" Block . . . . .	600
6" Block . . . . .	450
8" Block . . . . .	420
12" Block . . . . .	395

#### Limitations

- Mortar type should be correlated with the particular masonry unit to be used because certain mortars are more compatible with certain masonry units.
- 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 of high-water retentivity.
- Cover packaged material at all times.

#### Testing

- Test method C 780 is acceptable for pre-construction and construction evaluation of mortars for plain and reinforced unit masonry.
- There is no ASTM method for determining the conformance or nonconformance of a field-prepared mortar to the property specification of Specification C 270.
- Compressive strength values resulting from field tested mortars do not represent the compressive strength of mortar as tested in the laboratory nor that of the mortar in the wall. Physical properties of field sample mortars shall not be used to determine compliance to the ASTM C 270 intended as criteria to determine the acceptance or rejection of the mortar.

#### Retempering

Mortars that have stiffened because of evaporation of water from the mortar shall be retempered. Mortars shall be used and placed in final position within 2<sup>1/2</sup> hours after initial mixing.

**TYPE S-P&L TWR** (Portland : Lime : Sand : Water Repellent)**5. LEED INFORMATION****Applicable Credits:**

- MR Credit 4.1
- MR Credit 4.2
- MR Credit 5.1
- MR Credit 5.2
- Pre Consumer Recycled Content ..... 4.3%
- Local Harvest Content..... 77%
- Production Location
  - City..... Elburn
  - State..... Illinois
  - Zip.....60119
- 100% harvested w/in 500 miles

**6. TECHNICAL DATA****Applicable Standards**

- ASTM C 270, "Standard Specification For Mortar For Unit Masonry"
- ACI 530 "Building Code Requirements for Masonry Structures"
- ACI 530.1 "Specification for Masonry Structure

**ASTM C 270, TEST RESULTS FOR PCI TYPE S-P&L TWR MORTAR.**

28 day strength ..... 2,979 psi  
 Water retention..... 89.00 %  
 Initial Flow ..... 110 %  
 Final Flow..... 98 %  
 Air Content..... 3.60 %  
 August 6, 2003

**ACI 530****-Mortar References**

- Part 1 (General)
  - Section 1.5 Compressive Strength of Masonry (f' m)
  - Table 1 and table 2
  - See PCI Compressive Strength of Masonry Tests**
- Part 2 (Products)
  - References ASTM C 270
  - See PCI Mortar Data Sheet**

**7. TECHNICAL SERVICES****Brian Petty**

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**8. SAFETY/HEALTH**

- Refer to M.S.D.S. for safety/health information.

**9. 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 the product (as purchased) if found to be defective, or at the shipping companies' option, to refund the purchase price. All claims under this warranty must be written and submitted to SPEC MIX, Inc.