



03 DIVISION  
SHOTCRETE

# DRY PROCESS SHOTCRETE



## Superior Bond. Fast Setting.

SPEC MIX® Dry Process Shotcrete is a preblended concrete designed for pneumatically applied dry process shotcrete applications. SPEC MIX dry process shotcrete products are specifically formulated for enhanced shooting characteristics and physical performance making this product ideal for pneumatically applied concrete applications. SPEC MIX Dry Process Shotcrete formulations come in ACI gradation 1 (DP-01) and gradation 2 (DP-02 & DP-03) to allow the applicator the ability to select a product specifically designed with an aggregate gradation formulated for the depth of the application. SPEC MIX Dry Process Shotcrete products are suited for, but not limited to, the repair of bridges, parking structures, dams, or any concrete structure. Available in 80 lb (36.2 kg) and 3,000 lb (1,360.7 kg) bulk bags, SPEC MIX Dry Process Shotcrete is engineered for optimal adhesion and durability.

SPEC MIX Dry Process Shotcrete is produced under strict manufacturing standards supported by complete quality control measures that are assigned to each batch. A digital printout displaying the proper proportions per batch may be kept as a permanent record. SPEC MIX shotcrete products are designed to meet applicable shotcrete ASTM and ACI standards.

### TYPICAL MATERIALS

- PORTLAND CEMENT
- FLY ASH
- SILICA FUME
- SYNTHETIC FIBERS
- AGGREGATES
- SPECIAL CHEMICAL ADMIXTURES



- TMS GRADATION 1 (DP-01)
- TMS GRADATION 2 (DP-02)
- TMS GRADATION 2 (DP-03)

## DRY PROCESS SHOTCRETE

### INSTALLATION/APPLICATION

Thoroughly tested and trialed by certified nozzlemen, SPEC MIX Dry Process Shotcrete is a dry concrete product designed for dry process shotcrete applications. SPEC MIX shotcrete should be installed in accordance with the provisions of the national or local building code and The American Concrete Institute's recommended practices ACI, "Guide to Shotcrete". Shotcrete products should be applied only by an experienced, certified nozzleman.

Substrate preparation is critical for promoting good bond. When applying shotcrete materials to concrete surfaces, any deteriorated concrete should be removed until sound concrete is exposed. The exposed surface should be free of loose and/or friable material, and dust.

When combining water with the shotcrete mixture, use clean, potable water.

SPEC MIX Dry Process Shotcrete materials should be pneumatically installed. Hot and/or dry conditions may cause the shotcrete to harden more rapidly; therefore, a fog mist may be required to ensure proper curing. Prior to the application of shotcrete, the substrate should be cleaned and evenly moistened, but not saturated.

Although SPEC MIX shotcrete products are designed to reduce rebound, some rebound is to be expected. Do not incorporate rebound material back into the applied shotcrete. Once the shotcrete is applied, a variety of finishing techniques can be used to achieve the desired surface texture. Some applications may require a finish (flash) coat. After the desired finish is achieved, provide sufficient moisture to permit continuous hydration of the cementitious materials for optimum curing.

### SIZES AND EQUIPMENT

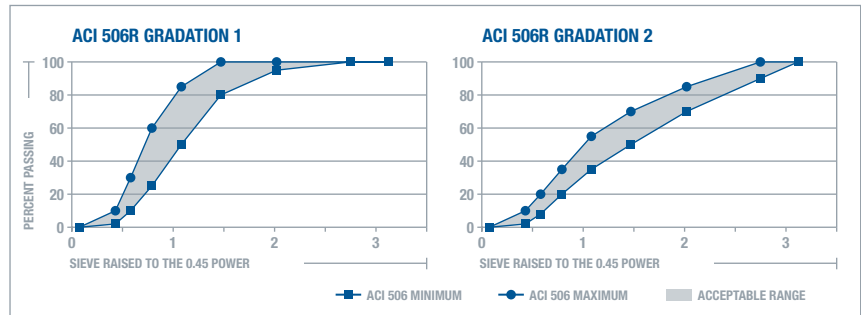
SPEC MIX shotcrete products are available in 80 lb (36.2 kg) packages for easy hand loading, or in 3,000 lb (1,360.7 kg) reusable bulk bags to be used with the various SPEC MIX silo systems. When using the silo system, once the bulk bags of shotcrete mix are delivered to the project site, the portable silo is loaded with a job site forklift and the product is dispensed into the shotcrete machine as needed.

### LIMITATIONS

When applying SPEC MIX dry process shotcrete products in adverse weather conditions, follow ACI recommendations for

### TYPICAL AGGREGATE GRADATION DATA

AGGREGATE GRADATION PLAYS A CRUCIAL ROLE IN THE PERFORMANCE OF SHOTCRETE. SPEC MIX SHOTCRETE PRODUCTS ARE DESIGNED TO MEET ACI 506R GRADATION 1 OR 2.



### TYPICAL FIELD DATA

|   | DP-1                 | DP-2                 | DP-3                 |
|---|----------------------|----------------------|----------------------|
| COMPRESSIVE STRENGTH (ASTM C 42)          |                      |                      |                      |
| 1-DAY                                     | 2,200 PSI (15.1 MPa) | 2,500 PSI (17.2 MPa) | 3,000 PSI (20.6 MPa) |
| 3-DAY                                     | 4,000 PSI (27.5 MPa) | 4,250 PSI (29.3 MPa) | 4,500 PSI (31.0 MPa) |
| 7-DAY                                     | 5,000 PSI (34.4 MPa) | 5,500 PSI (37.9 MPa) | 5,750 PSI (39.6 MPa) |
| 28-DAY                                    | 6,000 PSI (41.3 MPa) | 7,000 PSI (48.2 MPa) | 7,500 PSI (51.7 MPa) |
| MIN FLEXURAL STRENGTH (ASTM C 78)         |                      |                      |                      |
| 28-DAY                                    | 900 PSI (6.2 MPa)    | 900 PSI (6.2 MPa)    | 900 PSI (6.2 MPa)    |
| RAPID CHLORIDE PERMEABILITY (ASTM C 1202) | 700 COULOMBS         | 700 COULOMBS         | 700 COULOMBS         |
| RAPID FREEZE/THAW (ASTM C 666)            | 90                   | 90                   | 90                   |
| DURABILITY FACTOR                         |                      |                      |                      |

ACTUAL RESULTS MAY VARY DUE TO WORKMANSHIP, REGIONAL MATERIAL VARIATIONS, AND JOBSITE CONDITIONS.

hot and cold weather concrete construction at temperatures below 40 °F (4 °C) or above 100 °F (38 °C) respectively. The performance of a shotcrete product is dependent not only on the material, but the equipment and jobsite personnel mixing and placing the shotcrete material. A nozzleman and crew that are properly trained in construction methods for applying shotcrete material is critical to the project's success. Shotcrete should be cured in accordance with TMS 402/602 "Guide to Curing Concrete" to minimize plastic shrinkage. Properly mixed and installed shotcrete requires little to no maintenance.

### LIMITED WARRANTY

#### IN THE UNITED STATES

**NOTICE:** Obtain the applicable LIMITED WARRANTY at [www.specmix.com/product-warranty](http://www.specmix.com/product-warranty) or send a written request to SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

**AVISO:** Obtenga la GARANTÍA LIMITADA correspondiente en [www.specmix.com/product-warranty](http://www.specmix.com/product-warranty) o envíe una solicitud por escrito a SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

### IN CANADA

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### FOR MORE INFORMATION:

- CONTACT YOUR LOCAL SPEC MIX® MANUFACTURER
- VISIT [WWW.SPECMIX.COM](http://WWW.SPECMIX.COM)
- CONTACT SPEC MIX®, INC.  
PHONE: 888-SPEC MIX FAX: 651-454-5315