



1. Product Name

- SPEC MIX® Self Consolidating Masonry Grout (SCG)
- SPEC MIX® Core Fill Grout (Fine and Course)

2. Manufacturer

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3. Product Description

BASIC USE

SPEC MIX® SCG
 SPEC MIX® Self Consolidating Grout (SCG) is a dry, preblended, cement-based grout used to bond adjacent masonry units, fill bond beams, and occupy all areas around steel reinforcement in masonry assemblage cores. Suited for both low- and high-lift applications, SPEC MIX SCG is ideal for grout lifts greater than 5' (1.5 m).

SPEC MIX SCG delivers outstanding fluidity and increased cohesion over conventional core fill grout, with excellent resistance to fluid grout mix segregation. It easily fills masonry cores without voids and with no consolidation effort (mechanical vibration), even around heavily congested reinforcing steel and other obstructions.

SPEC MIX Core Fill Grout

SPEC MIX Core Fill Grout is a dry, preblended mix with outstanding flow, formulated to fill masonry voids and meet ASTM C476 requirements for reinforced masonry construction. A fluid cementitious material, SPEC MIX Core Fill Grout bonds adjacent masonry units and steel reinforcement in the cores of masonry units to the masonry assemblage. It can also be used to reinforce bond beams. Used in conjunction with existing reinforcement, SPEC MIX Core Fill Grout produces a structurally sound final wall system for reinforced masonry construction.

COMPOSITION & MATERIALS

SPEC MIX products are produced under strict manufacturing standards, with complete quality control measures implemented for every batch.

SPEC MIX products are locally manufactured throughout the United States and Canada by licensed manufacturers who use high tech blending equipment and follow strict quality control procedures. Most SPEC MIX products are produced with local raw materials within 500 miles of the manufacturing facility.

SPEC MIX SCG is available in both coarse and fine formulations and is composed of cementitious materials, the newest generation of water-reducing and viscosity-modifying admixtures, and dried aggregates. Aggregate gradations are optimized to meet ACI gradation 1 or 2 and ASTM C404 requirements.

SPEC MIX Core Fill Grout is available in course and fine formulations and contains Portland cement, pozzolans and dried aggregates.

TYPES & SIZES

SPEC MIX SCG and Core Fill Grout products are packaged in 80 lb (36 kg) or 94 lb (42 kg) bags for easy hand loading and 3000 lb (1360 kg) bulk bags for use with any SPEC MIX material delivery system.

BENEFITS

SPEC MIX SCG

- Flows around reinforcement and fills voids without segregation or separation
- Preblended to minimize labor cost and provide batch to batch consistency
- Delivers enhanced performance over standard grout products and is accepted for all types of masonry construction
- Requires no consolidation or reconsolidation, resulting in significant labor savings
- Certified to meet ASTM C476 proportion and property requirements for core fill grout

SPEC MIX Core Fill Grout

- Preblended to minimize labor cost and provide batch to batch consistency
- Certified to meet ASTM C476 proportion and property requirements for core fill grout
- Certified to meet ASTM C476 compressive strength requirements for reinforced masonry construction in all types of grout applications

LIMITATIONS

- SPEC MIX SCG and SPEC MIX Core Fill Grout must be installed in accordance with



SPEC MIX SCG reduces labor by eliminating consolidation and reconsolidation of masonry grout.

applicable ASTM standards. Good construction practices ensure durable, functional and watertight construction.

- Due to the effectiveness of its proprietary admixtures, SPEC MIX SCG should be discarded after 30 minutes from the time of initial mixing.

4. Technical Data

APPLICABLE STANDARDS

ASTM International (ASTM)

- ASTM C33 Standard Specification for Concrete Aggregates
- ASTM C150 Standard Specification for Portland Cement
- ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete
- ASTM C404 Standard Specification for Aggregates for Masonry Grout
- ASTM C476 Standard Specification for Grout for Masonry
- ASTM C595 Standard Specification for Blended Hydraulic Cements
- ASTM C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- ASTM C989 Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
- ASTM C1019 Standard Test Method for Sampling and Testing Grout



SCG Slump-Flow test targets a 20" (508 mm) spread in 2 - 5 seconds.

- ASTM C1093 Standard Practice for Accreditation of Testing Agencies for Unit Masonry
- ASTM C1157 Standard Performance Specification for Hydraulic Cement
- ASTM C1314 Standard Test Method for Compressive Strength of Masonry Prisms
- ASTM C1611 Standard Test Method for Slump Flow of Self-Consolidating Concrete

American Concrete Institute (ACI) - ACI 530.1 Specifications for Masonry Structures

PHYSICAL PROPERTIES

See Table 1.

5. Installation

PREPARATORY WORK

Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

METHODS

Silo Mixing

When using one of the patented SPEC MIX silo systems, bulk bags of SPEC MIX SCG or Core Fill Grout are delivered to the project site with a silo. The portable silo is loaded with a jobsite forklift, and the product is dispensed into the mechanical batch mixer. As much or as little material can be mixed to suit project needs. Products should be hand mixed only with written approval of the project specifier or engineer.

Mixing SPEC MIX SCG

To start, add 80% of the estimated required water content to the SCG dry mix. Optimal mix water amounts, predetermined by SPEC MIX engineers, are available from a SPEC MIX representative. Always use clean, potable water.

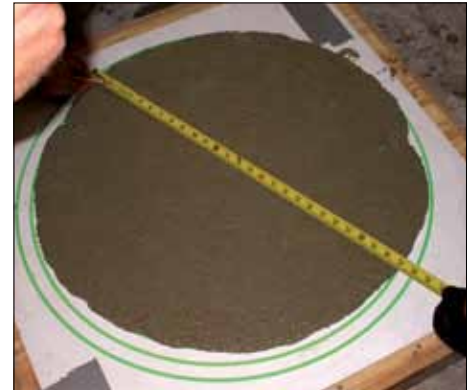
Once all ingredients have been added, mix SCG for at least 2 minutes. The unique chemistry of the specialized admixtures requires approximately 2 minutes to activate. A mechanical batch mixer is strongly recommended.

When the mix appears fluid and consistent, temper the SCG with water, as needed to achieve optimal fluidity without segregation. Total mix times are 3 - 5 minutes and should be consistent from batch to batch. Water/grout mix ratios should also be consistent.

Although a visual test of the cementitious paste and aggregates will indicate when a homogenous mix is achieved, it is imperative to perform a slump-flow test and visual stability index (VSI) assessment to ensure the mix is ready. Consult with SPEC MIX, Inc., for recommended field testing and handling directions.

Under the following conditions, place grout in lifts not exceeding 12.67' (3.86 m):

- When cleanouts are required for lifts exceeding 5' (1.5 m)
- After masonry has cured for at least 4 hours
- When SPEC MIX SCG grout slump flow is maintained between 24" - 30" (610 - 762 mm)
- When no intermediate reinforced bond beams are placed between the top and bottom of the pour height



Total spread for SCG should range between 22" - 30" (559 - 762 mm) when mixed with the appropriate water content.

Mixing SPEC MIX Core Fill Grout

Using clean, potable water, add either the maximum amount consistent with optimum flow and slump or the amount specified in the project documents. To begin, place 2/3 of the required potable water into the mechanical mixer. Typically, one 80 lb (36 kg) bag requires approximately 2 gal (7.5 L) or more of water; the exact amount, however, depends upon project specifications and desired consistency or slump. When mixing Core Fill Grout from SPEC MIX silos, dispense as much dry mix as desired and add the appropriate amount of water to meet specifications and the intended consistency or slump. There is no sand or gravel to shovel. After dispensing the product into the mixer, adjust the water content and let the Core Fill Grout mix. Mixing times are 4-5 minutes and should be held consistent from batch to batch. Maintain the same mixing procedures to maintain consistency throughout the project.

PRECAUTIONS

- Maintain uniform water/cement ratios and mix times. Adding too much water when mixing can compromise compressive strength by raising the water/cement ratio of the grout
- Hand-mix only with written approval of the project specifier or engineer
- Grout must cure for a minimum of 28 days

TABLE 1 PHYSICAL PROPERTIES		
Properties	Coarse	Fine
Compressive strength (ASTM C1019), 28-day	3000 - 5000 psi (21 - 35 MPa)	3000 - 5000 psi (21 - 35 MPa)
Slump flow (ASTM C1611)	24" - 30" (610 - 762 mm)	24" - 30" (610 - 762 mm)
T-20	2 - 5 seconds	2 - 5 seconds
Visual Stability Index, VSI (ASTM C1611)	0	0



- Due to the high fluidity of SPEC MIX SCG, cells to be filled should be cross-webbed with mortar at the concrete masonry unit core to prevent leakage into adjacent cells not requiring core fill grout
- Safety glasses and a dust mask are recommended when handling any grout mixture containing silica. The cementitious materials mixed onsite are highly alkaline in nature and, upon contact with water, are irritating to eyes and skin. In case of eye contact, flood eyes repeatedly with clean water and see a physician immediately. Do not rub eyes. Wash hands thoroughly after handling or before eating. Do not take internally. Keep out of the reach of children
- SPEC MIX SCG should be discarded after 30 minutes from the time of initial mixing

BUILDING CODES

Installation must comply with requirements of all applicable local, state and federal code jurisdictions.

6. Availability & Cost

SPEC MIX products, as well as the SPEC MIX silo delivery system, are available through a network of nationally licensed manufacturers with local distribution to every major U.S. market and select regions of Canada. Contact SPEC MIX, Inc., at (888) 773-2649 for more information, or visit the www.specmix.com website to locate a local manufacturer.

Consult a local SPEC MIX manufacturer or SPEC MIX, Inc., for detailed price information.

7. Warranty

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, express or implied, including, but not limited to, those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that, except for claims for bodily injury, Seller's liability to the Buyer or any third party, arising out of the purchase of the Product from the Seller by Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

8. Maintenance

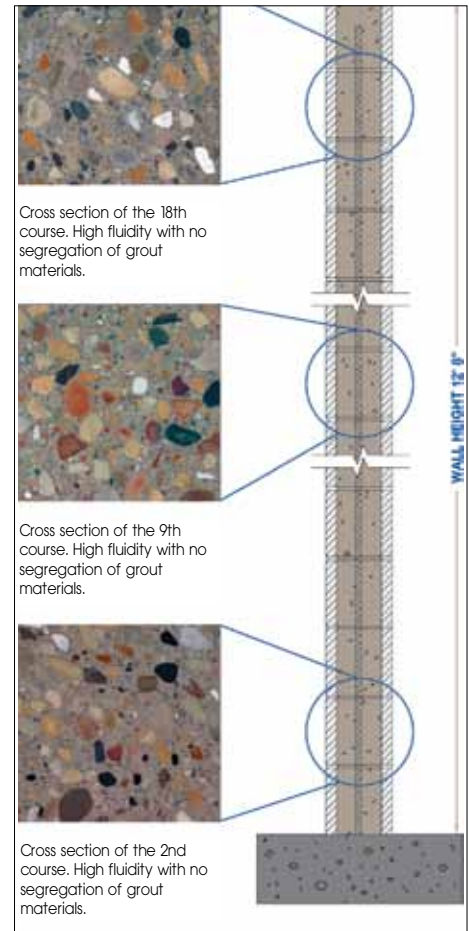
Properly mixed and installed masonry units and mortar require little maintenance. Depending on service conditions, masonry walls may require periodic cleaning and tuckpointing.

9. Technical Services

For technical assistance, contact SPEC MIX, Inc., or a local SPEC MIX manufacturer.

10. Filing Systems

- Smart Building Index
- MANU-SPEC®
- Additional product information is available from the manufacturer upon request.



SPEC MIX SCG ensures that aggregates stay evenly suspended, without external consolidation and reconsolidation

Grout Type to ASTM C476	Maximum Width of Grout Space for Grouting between Masonry Wythes ¹	Maximum Grout Pour Height	Minimum Grout Space Dimensions for Grouting Cells of Hollow Units ^{2, 3}
Fine	3/4" (19.1 mm)	1' (0.305 m)	1 1/2" x 2" (38.1 x 50.8 mm)
Fine	2" (50.8 mm)	5' (1.52 m)	2" x 3" (50.8 x 76.2 mm)
Fine	2 1/2" (63.5 mm)	12' (3.66 m)	2 1/2" x 3" (63.5 x 76.2 mm)
Fine	3" (76.2 mm)	24' (7.32 m)	3" x 3" (76.2 x 76.2 mm)
Coarse	1 1/2" (38.1 mm)	1' (0.305 m)	1 1/2" x 3" (38.1 x 76.2 mm)
Coarse	2" (50.8 mm)	5' (1.52 m)	2 1/2" x 3" (63.5 x 76.2 mm)
Coarse	2 1/2" (63.5 mm)	12' (3.66 m)	3" x 3" (76.2 x 76.2 mm)
Coarse	3" (76.2 mm)	24' (7.32 m)	3" x 4" (76.2 x 102 mm)

¹ Grout space dimension is the clear dimension between any masonry protrusion and shall be increased by the diameters of the horizontal bars within the cross section of the grout space.
² Area of vertical reinforcement shall not exceed 6% of the area of the grout space.
³ Masonry Standard Joint Committee 2005/ACI 530-05 Table 1.16.1.

