



1. Product Name

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

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, it meets ASTM C476 requirements for reinforced masonry construction. SPEC MIX Core Fill Grout is a fluid cementitious material that 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 jobsite.

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 coarse and fine formulations and contains Portland cement, pozzolans and dried aggregates.

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 in 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 self-consolidating grout
- Certified to meet ASTM C476 flow requirements

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



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

LIMITATIONS

- SPEC MIX SCG and SPEC MIX Core Fill Grout must be installed in accordance with applicable ASTM standards. Good construction practices ensure durable and functional 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





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

- ASTM C1019 Standard Test Method for Sampling and Testing Grout
- 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 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 job site 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.

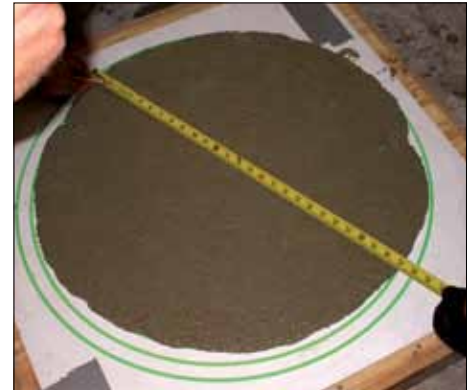
Once all ingredients have been added, mix SCG for at least 2 minutes. The unique chemistry of the specialized admixtures requires approximately 2 minutes to activate. A mechanical batch mixer is strongly recommended.

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 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 into 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

TABLE 1 PHYSICAL PROPERTIES

Properties	Coarse SCG	Fine SCG
Compressive strength (ASTM C1019), 28-day	3000 - 5000 psi (21 - 35 MPa)	3000 - 5000 psi (21 - 35 MPa)
Slump flow (ASTM C1611)	22" - 30" (559 - 762 mm)	22" - 30" (559 - 762 mm)
T-20	2 - 5 seconds	2 - 5 seconds
Visual stability index, VSI (ASTM C1611)	0	0



- Grout must cure for a minimum of 28 days
- 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
- SPEC MIX SCG should be discarded after 30 minutes from the time of initial mixing

Safety

This product contains greater than 0.1% crystalline silica. Avoid breathing dust; use a NIOSH-approved dust respirator and use only with adequate ventilation to keep dust below permissible levels. Product also contains cementitious materials injurious to eyes. Contact with freshly mixed product can cause severe burns. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. In case of eye contact, flush with plenty of water for 15 minutes. Consult a physician. Keep out of the reach of children.

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

SPEC MIX LIMITED PRODUCT WARRANTY: SPEC MIX, Inc. warrants these product to be of merchantable quality when used or applied in accordance with the instructions. The 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.

8. Maintenance

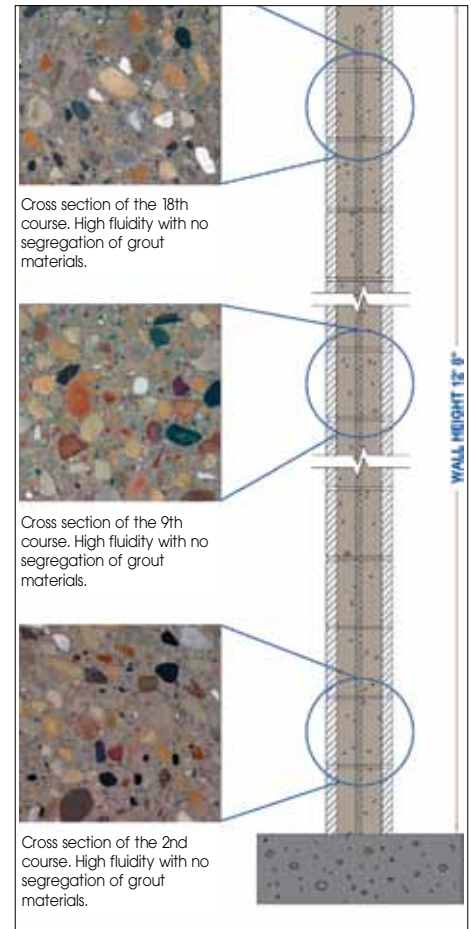
Properly mixed and installed masonry units and mortar require little maintenance. Depending on service conditions, masonry walls may require periodic cleaning and tuckpointing.

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

Minimum Grout Space Dimensions			
Grout Type	Maximum Width of Grout Space ¹ 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.