

# GENERAL-PURPOSE

NON-SHRINK, NON-METALLIC CONSTRUCTION GROUT

## PURPOSE

GENERAL-PURPOSE Construction Grout is a versatile, non-shrink (shrinkage compensated), non-metallic material that provides precision grouting in fluid, flowable or dry pack consistencies.

GENERAL-PURPOSE is recommended for grouting:

1. Bearing plates and base plates
2. Columns, beams and precast walls
3. Equipment and pumps
4. Shear keys

## DESCRIPTION

GENERAL-PURPOSE Construction Grout is a mixture of Portland Cement, specially graded aggregates and proprietary admixtures. It is free of iron particles, chloride and gypsum.

## PACKAGING

GENERAL-PURPOSE is available in 50 lb. (22.7 kg) bags or pails.

## PROPERTIES

GENERAL-PURPOSE Construction Grout meets or exceeds the ASTM-C-1107 and CRD-C-621 (Grade A, B and C) specifications.

### Compressive Strength (ASTM-C-109)

Mixed at 9 pints (4.2 L)

psi	MPa	
2000	13.8	(at 1 day)
4000	27.6	(at 3 days)
5000	34.5	(at 7 days)
7500	51.7	(at 28 days)

Mixed at 8 pints (3.8 L)

psi	MPa	
2500	17.2	(at 1 day)
5000	34.5	(at 3 days)
6000	41.4	(at 7 days)
8000	55.2	(at 28 days)

Mixed at 5 pints (2.4 L)

psi	MPa	
5000	34.5	(at 1 day)
7000	48.2	(at 3 days)
9000	62.0	(at 7 days)
10000	68.9	(at 28 days)

### Consistency (ASTM-C-230)

Flow cone

Maximum flow 4.5 qts. of water

30 seconds

### Height Change of Moist-Cured Grout (ASTM-C-1090)

55% humidity 73°F

Maximum flow 4.5 qts. of water

- +0.02% at 1 day
- +0.03% at 3 days
- +0.08% at 7 days
- +0.09% at 28 days

## YIELD

The yield is approximately .43 ft<sup>3</sup> for 50 lbs. (.012 m<sup>3</sup> for 22.7 kg) of material with 4 quarts (3.8 L) of mixing water. When extended with 25 lbs (11.3 kg) of 3/8" (1 cm) pea gravel, the yield is approximately .58 ft<sup>3</sup> (.016 m<sup>3</sup>).

Actual yield will vary slightly depending on the amount of water, temperature and other field conditions.

## APPLICATION

**Storage:** Opened containers should be used immediately or discarded. Material should be stored in a cool, dry place when not in use.

**Preparation:** Thoroughly clean all contact surfaces. Existing concrete should be strong and sound. Surface should be roughened to ensure bond. Metal base plates should be clean and free of oil and other contaminants.

Maintain contact areas between 45°F (7°C) and 90°F (32°C) before grouting and during curing period. For hot and cold weather applications, contact a Symons representative.

Prior to placing grout, surface should be saturated for a minimum period of four hours, and preferably twenty-four hours.

Seal form surfaces to prevent water or grout loss. Provide an angle in the form high enough to maintain grout flow during placement. Forms should be at least 1" (2.5 cm) higher than the bottom of the base plate.

**Mixing:** A mechanical mixer with rotating blades, like a mortar mixer, works best. Small quantities can be mixed with hand tools. Place approximately 3/4 of the needed water into the mixer or suitable container, then slowly add grout and blend thoroughly for five minutes. Add only the remaining water necessary to achieve the desired consistency. For hot weather conditions above 90°F (29°C), mix grout using cold water. For cold weather conditions below 50°F (10°C) mix grout with warm water. The working time for this material is approximately 30 minutes, depending on field conditions.

Three placing consistencies can be obtained by varying the water/cement ratio:

Fluid:	9 pts/50 lbs.	(4.2 L/22.7 kg)
Flowable:	8 pts/50 lbs.	(3.8 L/22.7 kg)
Dry pack:	5 pts/50 lbs.	(2.4 L/22.7 kg)

Placements greater than 3" (7.6 cm) in thickness must be extended with up to 25 lbs (11.3 kg) of 3/8" (1 cm) pea gravel for each 50 lbs. (22.7 kg) bag of grout.

**Placement:** Grout should be placed from one side of the grout box to avoid entrapped air and voids. Placement and consolidation should be continuous for any one section. When nearby equipment causes vibration, the equipment should be shut down for 24 hours.

**Finishing:** Forms may be removed when grout is completely self-supporting. Cut away areas where grout restricts movement, i.e., edges of steel base plates, etc. For best results, grout should slope downward at a 45° angle from the lower edge of the steel base plate or similar structure.

Exposed grout surfaces must be cured thoroughly. Apply a cure and seal compound, like Symons CURE & SEAL HS WB, for the best results.

Unusual applications or conditions may require technical assistance of a Symons representative.

### **CLEAN-UP**

Clean tools and equipment with water.

### **LIMITATIONS**

Do not retemper after initial mixing. Do not add other cements or additives.

### **SHELF LIFE**

Shelf life of properly stored material is one year.

### **WARRANTY**

Symons warrants, for 12 months from the date of manufacture, or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Symons, the product is free of manufacturing defects and conforms to Symons' published specifications in force on the date of acceptance by Symons of the order. Symons shall only be liable under this warranty if the material has been applied, used, and stored in accordance with Symons instructions in this technical data sheet.

The purchaser must examine the product when received and promptly notify Symons in writing of any nonconformity before the product is used, or no later than 30 days after such nonconformity is first discovered. If Symons, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the nonconforming product, refund the purchase price or issue a credit. This is the sole and exclusive remedy for breach of this warranty.

Only a Symons officer is authorized to modify this warranty. The sales information on the Symons website and received by the customer during the sales process does not supersede this warranty and the specifications of the product in force on the date of sale. **THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.**

### **PRECAUTIONS**

It is mandatory to take the following precautions to protect workers and the public:

1. KEEP OUT OF THE REACH OF CHILDREN.
2. Contains free silica and may cause delayed lung injury (silicosis). Avoid inhalation of dust and ensure adequate ventilation.
3. Avoid contact with skin. Protective clothing is recommended. Contact areas should be thoroughly washed with soap and water.
4. Avoid contact with eyes. Protective goggles are recommended in case of splashing. Flush eyes with water if contact occurs.
5. Avoid ingestion of material. If ingestion occurs, contact poison center or physician.

Additional precautions, safety information and first aid treatments are contained in the Material Safety Data Sheet.

### **LIMITATION OF LIABILITY**

Symons shall not be liable, in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injuries), or economic losses of any kind; or for any special, incidental, indirect, consequential, special, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, this Agreement, even if Symons could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this agreement, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

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