

MULTI-PURPOSE

NON-SHRINK, NON-METALLIC CONSTRUCTION GROUT

PURPOSE

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

MULTI-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

MULTI-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

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

PROPERTIES

MULTI-PURPOSE Construction Grout meets or exceeds ASTM-C-1107 (Grade B) and CRD-C-621 specifications.

Compressive Strength (ASTM-C-109)

Mixed at 9 pints (4.2 L)

psi	MPa	
2057	14.2	(at 1 day)
4275	29.4	(at 3 days)
6290	43.3	(at 7 days)
8925	61.4	(at 28 days)

Mixed at 8 pints (3.8 L)

psi	MPa	
2130	14.6	(at 1 day)
4620	31.8	(at 3 days)
6715	46.2	(at 7 days)
9305	64.0	(at 28 days)

Mixed at 7 pints (3.3 L)

psi	MPa	
2660	18.3	(at 1 day)
6485	44.6	(at 3 days)
7470	51.4	(at 7 days)
10010	68.9	(at 28 days)

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

55% humidity 72°F

Maximum flow 4.5 qts. of water

+0.08%	at 1 day
+0.09%	at 3 days
+0.12%	at 7 days
+0.13%	at 14 days
+0.13%	at 28 days

Time of Set (ASTM-C-266)

55% humidity 72°F

Maximum flow 4.5 qts. of water

Initial set: 3 hours 51 minutes

Final set: 5 hours 33 minutes

YIELD

The yield is approximately .43 ft³ for 50 lbs. (.012 m³ for 22.7 kg) of material with 4.5 quarts (4.3 L) of mixing water. When extended with 25 lbs (11.3 kg) of 3/8" (1 cm) pea gravel, the yield is approximately .61 ft³ (.017 m³).

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.	(4.3 L/22.7 kg)
Flowable:	8 pts/50 lbs.	(3.8 L/22.7 kg)
Dry pack:	7 pts/50 lbs.	(3.3 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).

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 at 73°F (23°C).

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.

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.

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.

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