

## Technical Data

## 1107 ADVANTAGE™ GROUT

Cement Based, Non-Corrosive, Non-Shrink Grout

### PRODUCT DESCRIPTION:

1107 Advantage Grout is a non-shrink, non-corrosive, non-metallic grout. It is formulated as a cement based product with high quality raw materials. 1107 Advantage Grout offers pumpability, heat and thermal shock resistance and provides controlled, net positive expansion.

### PURPOSE:

1107 Advantage Grout is designed for interior and exterior grouting of precast concrete components, structural column base plates, pump and machinery bases, anchoring bolts, rebars, dowels, bearing pads, keyway joints and crane rails. It finds applications in paper mills, oil refineries, food plants, chemical plants, sewage and water treatment plants etc.

### ADVANTAGES:

- Controlled, net positive expansion
- Non shrink
- Non metallic/non corrosive
- Pourable/pumpable
- Resistant to heat and thermal shock
- Interior/exterior applications
- Resists water and salt penetration and damage from freeze-thaw cycles.

### MEETS SPECIFICATIONS:

- Corps of Engineers Specification for non-shrink grout: CRD-C 621 – Grades A, B, C
- ASTM C-1107 – Grades A, B, C Specification for non-shrink grout
- ASTM C-827 – 1107 Advantage Grout yielded a controlled positive expansion

### TEST RESULTS:

#### Expansion - ASTM C-1090

1 day	.02%
3 days	.03%
14 days	.08%
28 days	.09%

#### Test Results – ASTM C-1107

	Compressive Strength (PSI)			
	@ 1 Day PSI MPa	@ 3 Days PSI MPa	@ 7 Days PSI MPa	@ 28 Days PSI MPa
Fluidity				
Dry-Pack	5000 34.5	7000 48.2	9000 62.0	10000 68.9
Flowable	2500 17.2	5000 34.5	6000 41.4	8000 55.1
Fluid	2000 13.8	4000 27.6	5000 34.5	7500 51.7

### APPLICATION INSTRUCTIONS:

#### Surface Preparation:

Thoroughly clean all contact surfaces. Existing concrete should be strong and sound. Surface should be roughened to insure 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 Dayton Superior. Thoroughly wet concrete contact area 24 hours prior to grouting, keep wet and remove all surface water just prior to placement. If 24 hours is not possible, then saturate with water for at least 4 hours. Seal forms to prevent water or grout loss. On the placement side, provide an angle in the form high enough to assist in grouting and to maintain head pressure on the grout during the entire grouting process. 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 is best. Small quantities can be mixed with hand tools. When mixing less than a full bag, always first agitate the bag so that a representative sample is obtained. Place approximately 3/4 of the anticipated mix water into the mixer, add the grout mix, adding the minimum additional water necessary to achieve desired consistency. For hot weather conditions (greater than 85°F [29°C]) mix with cold water (approximately 40°F [4°C]). For cold weather conditions (less than 50°F [10°C]) mix with warm water (approximately 90°F [29°C]).

#### Water Requirements:

Desired Mix	Water per 50 lb. (22.7 kg) Bag
Dry Pack	5 pints (2.4L)
Flowable	8 pints (3.8L)
Fluid	9 pints (4.2L)

Mix for a total of five minutes ensuring uniform consistency. For placements greater in depth than 3" (7.6 cm), up to 25 lbs. (11.3 kg) of washed pea gravel (3/8" [1 cm] maximum size) must be added to each 50 lb. (22.7 kg) bag of grout. The approximate working time (pot life) is 30 minutes. This will vary somewhat with ambient conditions.

#### Placement:

Grout should be placed preferably from one side of grout box to avoid entrapping air pockets. Grout should not be over-worked or over-watered causing segregation or bleeding. Vent holes should be provided where necessary. When possible, grout bolt holes first. Placement and consolidation should be continuous for any one section of the grout. When nearby equipment causes vibration of the grout, such equipment should be shut down for a period of 24 hours at 73°F (23°C).

## Technical Data

### Finishing and Curing:

Forms may be removed when grout is completely self-supporting. Cut away areas where grout excessively restricts movement of steel, i.e., edges of base plates, etc. For best results, grout should extend downward at a 45° angle from the lower edge of the steel base plates or similar structures. Exposed grout surfaces must be cured. Dayton Superior recommends using: Day-Chem Cure & Seal (J-18), (J-20), (J-23) or a wet cure for 3 days.

### APPROXIMATE YIELD:

(Flowable Consistency)

.43 cu.ft. per 50 lb. (.0122 m<sup>3</sup> per 22.7 kg) bag

.61 cu.ft. per 50 lb. (.017 m<sup>3</sup> per 22.7 kg) bag extended with 25 lbs. (11.3 kg) of washed pea gravel [3/8" (1cm) maximum size]

### PACKAGING:

50 lb. (22.7 kg) multi wall, plastic lined bags.

### CLEAN-UP:

Use clean water

### LIMITATIONS:

Do not re-temper after initial mixing. Do not add other cements or additives to 1107 Advantage Grout. Setting time for 1107 Advantage Grout will slow down during cold weather [less than 50°F (10°C)] and speed up during hot weather [greater than 80°F (27°C)]. Contact Dayton Superior for specific recommendations.

Store in a cool, dry area free of direct sunlight.

### WARNING:

Skin is sensitive to cement. Wearing protective gloves and goggles is recommended. Avoid contact with eyes. Avoid prolonged contact with skin. Contains portland cement. Wash exposed skin promptly with water. May cause skin irritation as well as cement burns. In case of eye contact, flush eyes repeatedly with clean water and contact a physician. Harmful if ingested. Read MSDS before using product.

### TECHNICAL SERVICES:

Contact the technical staff for assistance at:

1-866-329-8724 • 1-913-233-1750 • FAX: 1-913-279-4806  
daytonsuperiorchemical.com

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