CTS CONSTRUCTION GROUT

Multi-Purpose, Non-Shrink, Contractor Grade ASTM C1107 Grout
for Structural and Non-Structural Grouting

PRODUCT DATASHEET

DESCRIPTION: CTS CONSTRUCTION GROUT is a versatile, non-shrink grout that can be mixed to any consistency from damp pack to fluid. CTS CONSTRUCTION GROUT is a high quality blend of portland cement, non-shrink additives, and specialty sand. When mixed with water, CTS CONSTRUCTION GROUT produces a durable, high strength material that can be used for grouting and general concrete applications on indoor and outdoor projects.

USES: CTS CONSTRUCTION GROUT is used for structural and non-structural applications, including precision grouting, base plates, precast components, machinery and equipment bases, anchor bolts, concrete repair, keyway joints, load bearing pads, and other non-shrink applications.

SURFACE PREPARATION: Concrete surfaces must be clean, sound, and free from any materials that may inhibit bond such as oil, dirt, asphalt, sealing compounds, acids, wax, and loose debris. When bonding is important, all surfaces should be mechanically abraded by scarifying, grinding, shot blasting or other approved methods. Placement area must be between 45°F to 90°F (7°C to 32°C). Saturate the substrate with clean water for a minimum of 4 hours and preferably 24 hours before grout placement. Remove any standing water or puddles before placement of the material.

FORMS: Construct forms to be watertight and non-absorbent. Joints should be sealed with polyurethane foam, caulk, or putty. Forms to be coated or lined with bond breaker or form release. Provide adequate vent holes to avoid air entrapment. Provide a head placement of 45 degree angle to facilitate placement for grout pour. Build forms 1" higher than bottom of plate and 1" to 3" between side of plate and form.

MIXING: Mix with a mechanical mortar mixer or an electric drill with a paddle device if possible. Add potable water to bucket and mechanical mixer first, then add dry grout material while mixing. Adjust water temperature to maintain mixed grout temperature from 45°F to 90°F (7°C to 32°C). Mix for a minimum of 4 to 5 minutes. Working time is approximately 15-20 minutes.

Consistency of the grout is dependent on jobsite variables such as ambient temperature, water temperature, product temperature and mixing method.

USE THE FOLLOWING MIX WATER GUIDELINES:

Plastic consistency – 5.0 quarts

Flowable consistency – 5.5 quarts

Fluid consistency – 5.75 quarts

Adjust the water to achieve the desired flow consistency. Do not exceed 6.25 quarts of water per 50-lb bag. Adding too much water may induce bleeding and segregation. Gauge fluid consistency within 25 to 35 seconds with ASTM C939 Flow Cone Method.

For deep pours over 2", extension is required, add up to 25 lbs of clean dry 3/8" pea gravel for every 50-lb bag. It is important to note that if increased fluidity is needed, do not exceed an 8 inch slump by ASTM C143 to prohibit any segregation from occurring.

OVERVIEW

Highlights:

- Non-Shrink: Provides dimensional stability and enhanced durability for precision grouting and concrete application
- Quick Setting: Minimizes downtime and ready for loading in 24 hours
- Multi-Purpose: Use for grouting, anchoring and many general concrete applications
- Mix To Any Consistency: From damp pack to fluid
- High Strength: Achieves 10,000 psi (69 MPa) compressive strength in 28 days at flowable consistency
- Easy To Use: Just add water

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03 01 30	Maintenance of Cast-in-Place Concrete
03 01 40	Maintenance of Precast Concrete
03 01 50	Maintenance of Grouting
03 01 70	Maintenance of Mass Concrete
03 60 00	Grouting
03 61 00	Cementitious Grouting
03 62 13	Non-Metallic Non-Shrink Grouting

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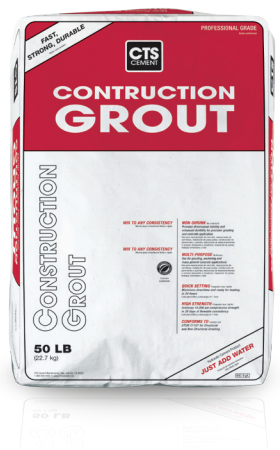

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This may require less than the stated maximum (6.25 quarts) water to be added. Do not add any additional dry materials such as cement, sand, additives or admixtures.

PLACEMENT: Place grout continuously into forms in one placement. CTS CONSTRUCTION GROUT may be placed by pump. Limit the amount of vibration during grout placement to reduce potential segregation. CTS Construction Grout must fill all areas and stay in contact with load bearing area. Remove forms once grout has achieved final set. All machinery near grout placement should be shut down for 24 hours.

CURE: Use a curing compound in accordance with ASTM C309 upon final set or wet cure with clean potable water on open surfaces for three days. The final color of CTS CONSTRUCTION GROUT is gray.

YIELD & PACKAGING: CTS CONSTRUCTION GROUT is available in 50-lb (22.7-kg) bags. One 50-lb bag will yield 0.44 cubic feet at a flowable grout consistency. Coverage may vary due to jobsite conditions.

TEMPERATURE: CTS CONSTRUCTION GROUT may be applied in temperatures ranging from 45°F to 90°F (7°C to 32°C).

SHELF LIFE: CTS CONSTRUCTION GROUT has a shelf life of 12 months when stored properly in a dry location, protected from moisture, out of direct sunlight, and in an undamaged package.

USER RESPONSIBILITY: Before using CTS products, read current technical data sheets, bulletins, product labels and safety data sheets at www.CTScement.com. It is the user's responsibility to review instructions and warnings for any CTS products prior to use.

WARNING: DO NOT BREATHE DUST. AVOID CONTACT WITH SKIN AND EYES. Use material in well-ventilated areas only. Exposure to cement dust may irritate eyes, nose, throat, and the upper respiratory system/lungs. Silica exposure by inhalation may result in the development of lung injuries and pulmonary diseases, including silicosis and lung cancer. Seek medical treatment if you experience difficulty breathing while using this product. The use of a NIOSH/MSHA-approved respirator (P-, N- or R-95) is recommended to minimize inhalation of cement dust. Eat and drink only in dust-free areas to avoid ingesting cement dust. Skin contact with dry material or wet mixtures may result in bodily injury ranging from moderate irritation and thickening/cracking of skin to severe skin damage from chemical burns. If irritation or burning occurs, seek medical treatment. Protect eyes with goggles or safety glasses with side shields. Cover skin with protective clothing. Use chemical resistant gloves and waterproof boots. In case of skin contact with cement dust, immediately wash off dust with soap and water to avoid skin damage. In case of skin contact with wet concrete, wash exposed skin areas with cold running water as soon as possible. In case of eye contact with cement dust, flush immediately and repeatedly with clean water, and consult a physician. If wet concrete splashes into eyes, rinse eyes with clean water for at least 15 minutes and go to the hospital for further treatment.

PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS and www.CTScement.com for additional safety information regarding this material.

LIMITED WARRANTY: CTS CEMENT MANUFACTURING CORP. (CTS) warrants its materials to be of good quality and, at its option, will replace or refund the purchase price of any material proven to be defective within one (1) year from date of purchase. The above remedies shall be the limit of CTS's responsibility. Except for the foregoing, all warranties expressed or implied, including merchantability and fitness for a particular purpose, are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

TYPICAL PHYSICAL DATA

Consistency	Plastic	Flowable	Fluid
Set Time, ASTM C-266 Mod			
Initial set (hours)	4.5	5.5	6.5
Final set (hours)	6.5	7.5	10
Compressive Strength, ASTM C109 Mod.			
1 day (psi)	4000 psi (27.6 MPa)	3200 psi (22 MPa)	2500 psi (17.2 MPa)
7 days (psi)	9000 psi (62 MPa)	8000 psi (55.2 MPa)	7000 psi (48.3 MPa)
28 days (psi)	11000 psi (75.8 MPa)	10000 psi (68.9 MPa)	9000 psi (62 MPa)
Post Hardened Height Expansion, ASTM C1090			
28 days	0.03%	0.03%	0.03%
Prehardened Height Expansion, ASTM C827			
At Final Set	0-0.3%	0-0.3%	0-0.3%

Data is obtained through laboratory conditions at 70°F