MasterFormat: 03 62 13

SEPTEMBER 2025
(Supersedes August 2015)

CG-86™

Construction-Grade Grout

DESCRIPTION

CG-86 construction-grade grout is a non-metallic, mineral aggregate based, non-shrink economical grout. The product is specifically developed as a high-strength, cost-effective, general-purpose grout for use across a broad range of large and small construction projects. CG-86 will not rust and contains no added chlorides or gypsum. CG-86 provides a range of consistency from dry pack to fluid to meet many different application requirements. It is furnished pre-mixed and ready to use. CG-86 may be extended for deep grouting with pea gravel for greater yield and increased economy. CG-86 is freeze-thaw stable and may be used for interior or exterior applications, above- or below-grade.

USES

CG-86 is versatile and designed for structural grouting of machine and column baseplate, anchoring doweling, precast wall panels, and bridge seats and bearing pads. CG-86 is suitable for the transportation, industrial, commercial, and municipal markets.

FEATURES/BENEFITS

- Furnished premixed and ready to use just add water.
- Excellent freeze-thaw characteristics long-term stability.
- Conforms to ASTM C 827 and ASTM C 1090 positive expansion.
- May be mixed to dry pack, plastic, flowable, and fluid consistencies for high versatility.
- Provides a high strength, non-shrink grout for a broad range of general construction projects.
- Offers the strength and characteristics required for cost-effective, general purpose grouting.
- Cost reductions are realized when extended with pea gravel for deep grouting.
- Requires no separate bonding agent … only pre-saturation of concrete with water prior to application.
- No site batching required for consistent results.
- No added chlorides or gypsum.

PACKAGING

50 Lb. (22.7 kg) Poly-Lined Bags

YIELD

0.43 ft.³ (0.012 m³) per bag.

SHELF LIFE

Store product on pallets in a cool, dry location. Shelf life of properly stored product is eighteen months from date of manufacture when stored in unopened, original packaging. Do not store outdoors.

SPECIFICATIONS/STANDARDS

- ASTM C 1107 (Grade A, B & C)
- Corps of Engineers Spec. CRD-C-621
- Various Department of Transportation Approvals

APPLICATION

Grouting application shall be performed in accordance with American Concrete Institute (ACI) 351.1R: Grouting between Foundations and Bases for Support of Equipment and Machinery and other applicable ACI recommendations. Minimum application thickness is 1/2” (12.7 mm).

Do not apply to frost covered concrete. Protect from freezing by use of insulated or electric curing blanket, external heating, or other suitable method for up to three days after application. Follow cold temperature application procedure ACI 306, “Standard on cold weather concreting” if both the daily temperature falls below 40° F (4.4° C) and the air temperature does not rise above 50° F (10° C) for more than 12 hours in any 24 hour period for three consecutive days prior to insulation. Also see COLD-WEATHER GUIDELINE: REPAIR MORTARS AND NON-SHRINK GROUTS available at Follow ACI 305 – “Standard on hot weather concreting” if conditions existing for rapid water loss which includes high air temperature, high winds, direct sun or low humidity. Also see HOT-WEATHER GUIDELINE: REPAIR MORTARS AND NON-SHRINK GROUTS available at www.wrmeadows.com.

CONTINUED ON REVERSE SIDE …

W. R. MEADOWS, INC.
P.O. Box 338 • Hampshire, IL 60140-0338
Phone: 847/214-2100 • Fax: 847/683-4544
1-800-342-5976
www.wrmeadows.com • info@wrmeadows.com

TECHNICAL DATA

PROPERTY	TYPICAL TEST RESULTS				TEST METHOD
Consistency	**Dry Pack**	**Plastic**	**Flowable**	**Fluid**	ASTM C827-95A
Mix Ratio (per 50 lb.):	5.0 pints	6.25 pints	6.75 pints	8.5 pints	
Flow:	Not Applicable	100-120%	120-140%	Not Applicable	ASTM C230-90
Flow:				40 Seconds[1]	ASTM C939
Set Time:	4-6 hours	4-6 hours	5-7 hours	6-8 hours	ASTM C191-92, Initial
Bond Strength at 28 Days:		2300 psi (15.8 MPa)	2500 psi (17.2 MPa)		ASTM C882 Modified
Freeze-Thaw Resistance:		100% Relative Dynamic Modulus	100% Relative Dynamic Modulus		ASTM C666, Procedure A, 300 Cycles
Compressive Strength @ 1 day, psi:	7,000 (48.3 MPa)	3,500 (24.1 MPa)	3,000 (20.7 MPa)	2,500 (17.2 MPa)	ASTM C109-13 Wet Cure
Compressive Strength @ 3 days, psi:	8,000 (55.1 MPa)	4,500 (31 MPa)	4,000 (27.6 MPa)	3,500 (24.1 MPa)	ASTM C109-13 Wet Cure
Compressive Strength @ 7 days, psi:	9,500 (65.5 MPa)	6,000 (41.3 MPa	5,500 (37.9 MPa)	5,000 (34.4 MPa)	ASTM C109-13 Wet Cure
Compressive Strength @ 28 days, psi:	10,000 (68.9 MPa)	8,000 (55.1 MPa)	7500 (51.7 MPa)	7,000 (48.2 MPa)	ASTM C109-13 Wet Cure

Footnote[1] – ASTM C1107 requires a flow cone time of less than 35 seconds for fluid consistency.
*All technical data is typical information and will vary due to testing methods, site conditions, temperature, curing, procedures, batching, and expected variations in naturally occurring raw materials. Statistical differences in test results should be anticipated. Onsite testing results may not correlate to published laboratory results due to testing variations. Tests conducted at 75° F (24° C) unless noted.

Surface Preparation ... Prepare concrete substrate in accordance with ICRI Technical Guideline No 310.2-1997: Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays. Mechanically roughen or high pressure water-jet the existing concrete substrate to an ICRI concrete surface profile (CSP) of CSP-4 or higher. Remove all unsound concrete and provide a profiled, porous surface. The substrate must also be structurally sound, dust-free, and free of grease, oil, dirt, curing compounds, release agents, or any other surface or penetrated contaminants, coatings, or similar materials that will adversely affect the bond. Sanding or wire-brushing are not approved concrete surface preparation methods. Substrate must be brought to a fully saturated, surface dry (SSD) condition and free of standing water during the entire application of the grout. Abrasive blast the steel base-plates or any steel that will come in contact with the CG-86 to a white metal finish.

Placement ... Mix only small quantities of CG-86 by hand until lump-free. Mechanically mix with a high torque, low speed drill (400-600 rpm) and paddle or paddle-type mortar mixer. Mix for a minimum of three minutes or until uniform and lump-free. Use the minimum water required to produce desired placement consistency. Do not mix more than can be placed in 15 minutes. Do not re-temper. Use only clean, potable water.

Aggregate Extension ... When grouting large areas, extend CG-86 with washed, dried, well-graded, non-reactive, dense pea gravel. For thicknesses 2″ - 4″ (50.8 – 101.6 mm), add up to 25% 3/8″ (9.5 mm) pea gravel. For medium-flow mixes, 4″ (50.8 mm) and over, add up to 50% 3/8″ (9.5 mm) pea gravel. The addition of pea gravel is based on percentage of the weight of the dry grout. The use of aggregate to extend the CG-86 will reduce flow and pumping characteristics. A well graded aggregate conforming to table 2 of ASTM C33, Size Number 8 will help to minimize loss of flow and pumping characteristics.

Forming ... Standard hard wood, exterior grade wood or metal forming may be used. The forms should be coated with form release agent for easy removal. The form edges should be caulked and sealed to a liquid-tight condition. Forms must be designed to provide a hydraulic head. Forming must also ensure adequate venting to avoid air entrapment. Do not make close fitting forms; allow 1/2″ (12.7 mm) clearance and 1″ (25.4 mm) for head. The forms should be placed between 2 – 6″ (50.8 – 152.4 mm) away from the perimeter of the machine base to allow for air to escape and to provide for a grout shoulder around the base plate.

CG-86 is easily placed by pouring or pumping and compaction can be accomplished by rodding or tapping. Place grout on one side, flowing to opposite and adjacent sides, to avoid entrapment of air. Grout head and excess grout may be removed after initial set. Remove the forms after the grout has sufficiently hardened (4 to 10 hours depending on temperature) to avoid damaging and trim edges to desired profile.

Pumping ... CG-86 when mixed to a flowable to fluid consistency without the addition of aggregate can be pumped using a suitable grout/mortar pump such as QuickSpray, Inc. (www.quikspray.com) Carrousel Pump 15023 GR3 and UB3 U-Blend Mixer® Combination with a minimum 1.5” (38.1 mm) diameter hose. Air compressor requirement is a minimum 125 LFM and 90 psi. Consult pump manufacturer for details on specific pumping instructions for their particular equipment.

If CG-86 has been extended with aggregate, ensure that the pump type is designed to handle the size and characteristics of the coarse aggregate. Ensure that the pump is equipped with a suitable Rock Valve™ or S-Valve or similar style pump designed to process coarse aggregate. Mortar or standard-type grout pumps should not be used to pump CG-86 that has been extended with aggregate, since these types of pumps are not designed to process aggregates.

Curing ... Immediately following application, cure CG-86 using a suitable curing compound from W. R. MEADOWS or in accordance with ACI 308. W. R. MEADOWS recommends VOCOMP-30, 2200-WHITE series or 1130-CLEAR. When conditions exist for rapid early water loss, the use of EVAPRE™, an evaporation retarder from W. R. MEADOWS, is also recommended.

PRECAUTIONS

Do not use as a repair mortar, overlay or underlayment. Please contact W. R. MEADOWS for specific repair mortar recommendations. Set time, flow and strength development are highly dependent on temperature. Colder temperatures will increase set time and delay compressive strength gain. Generally, set time will increase for every 10° F difference from 75° F in grout temperature by 30%. For example, at 65° F, CG-86 mixed to flowable consistency will have an approximate set time of 6.5-9 hours as compared to 5-7 hours stated for 75° F. Compressive strength development will be delayed up to 60% in cold temperatures versus 75° F at a given cure time and mix ratio. Grouting should be done using established concreting procedures according to ACI recommendations. Read and follow application information, precautions and Safety Data Sheet information. As with all cement-based materials, avoid direct contact with aluminum or similar type reactive metals. If contact must occur, coat the aluminum or other reactive metals with REZI-WELD 1000 or LV. This data sheet provides a summary of the factors, precautions, limitations, and design theories that should be considered when designing a grouting application, but is not stand alone or complete; project, environmental, and application specific requirements must be considered before drafting a guide specification, determining suitability or application of material. The suitability and/or functionality of the product are the direct and sole responsibility of the licensed design professional, applicator, and/or installer of the product. W. R. MEADOWS is not directly or indirectly acting in any manner as the project licensed design professional, such as, but not limited to, a professional engineer, a licensed architect, and/or a consultant.

For most current data sheet, further sustainability information, and SDS, visit www.wrmeadows.com.

LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.

© W. R. MEADOWS 2025