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(Supersedes April 2023)

588-10K

Non-Shrink, Non-Ferrous, Mineral-Aggregate-Based Precision Grout

DESCRIPTION

588-10K is a hydraulic-cement-based, precision, non-shrink, load-bearing grout designed to transfer load effectively and safely, ensuring long service time of the grouted item. It is a non-corrosive, non-metallic, mineral-based precision grout, developed to have high initial and ultimate flexural and compressive strengths. It can be mixed quickly as needed on the jobsite. 588-10K offers exceptional workability and is easily placed by pouring or pumping. The product is designed to give non-shrink performance under various conditions for both interior and exterior applications.

USES

588-10K is designed for precision grouting of machinery and equipment base plates, windmill turbines, generators, rolling mills, compressors, or similar types of machinery. 588-10K is also designed for grouting soleplates, bridge seats, precast columns and beams, steel column pads, precast beams, and segmental bridge construction. 588-10K can also be used for anchoring of guardrails, signposts, bridge seats, anchor bolts, guide wires, and dowels.

FEATURES/BENEFITS

- May be mixed to plastic, flowable, and fluid consistencies for easy application.
- Very high compressive and flexural strengths.
- High modulus to ensure proper load transfer.
- Non-shrink ensures proper load transfer.
- Quickly and easily placed by pouring or pumping.
- Resists heat up to 600˚ F (315.6° C).
- Resists many chemicals, including oils, petroleum products, solvents, and mild caustic alkalis.
- May be extended up to 50% by weight.
- No added chloride or gypsum.

PACKAGING

50 Lb. (22.7 Kg) Poly-Lined Bags

YIELD

Each bag yields 0.43 - 0.64 ft.^{3} (0.012 m^3 - 0.018 m^3) of in-place grout using the median water ratio level, dependent upon rate of extension.

SHELF LIFE

18 months from date of manufacture when stored indoors on pallets in a dry, cool area. Do not store product outside.

SPECIFICATIONS/STANDARDS

- ASTM C1107
- Corps of Engineers Specification: CRD-C 621
- USDA Accepted

APPLICATION

Grouting application shall be performed in accordance to American Concrete Institute (ACI) 351.1R: Grouting Between Foundations and Bases for Support of Equipment and Machinery and other applicable industry standard practices.

Surface Preparation ... All grout contact surfaces must be free of oil, grease, scale, penetrating sealers, or all other types of contaminates that will interfere with the bond. Mechanically roughen or high-pressure water-jet the existing concrete substrate. Surface must be rough and profiled, but generally level. Grouting area must be saturated with water 12 - 24 hours prior to grouting. Remove all excess water before placing grout.

Forming ... Forming method must provide for rapid, continuous grout placement. For pouring, allow a minimum clearance of 3" (76.2 mm) for entry and 6" (152.4 mm) minimum grout "head." Forming must also provide for venting to avoid entrapment of air. Provide 1/2" (12.7 mm) minimum form clearance on all sides and 1" (25.4 mm) clearance for head. Ensure form is well sealed and an appropriate form release agent has been applied for that type of form.

CONTINUED ON REVERSE SIDE ...

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Mixing ... Small quantities of 588-10K may be hand-mixed in a concrete mixing pan until lump-free. For large quantities and continuous pours, mix using a mortar mixer with rubber-tipped blades or appropriate grout pump for a minimum of three minutes or until lump-free and uniform. Use the minimum water required to produce desired placement consistency. Use 6.5 pt. (3.07 L) of water per bag for plastic consistency; 7.25 pt. (3.43 L) for medium flow (pourable), and 8.25 pt. (3.9 L) for high flow. Mix in two steps: add 2/3 of water requirement, then add grout. After partial mixing, add remainder of water for desired consistency. Thoroughly mix total quantity for 2 - 3 minutes. Do not mix more than can be placed in 15 minutes at 75˚ F (23.9°). Do not re-temper.

Placement ... 588-10K 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. When necessary, provide vent holes. Grout head and excess grout may be removed after initial set. When placing forms for grouting, it is recommended that the top of the forms be at least halfway up the sides of the base-plate thickness or machine base. Placing the grout just to the bottom of the base plate will result in an improper grout installation. If the forms cannot be placed halfway up the side of the machine base, the minimum distance is ¾" (19 mm) above the bottom of the machine-base plate. To achieve proper flow properties for typical installations, a minimum 1/2" (12.7 mm) is recommended. W. R. MEADOWS recommends the Ventures ToughTek P30 and P30ht Rotor Stator Pump (https://ventureseq.com/) combination for pump applications. The minimum thickness is project specific depending on the load bearing requirements as determined by the specifying engineer.

Curing ... Immediately following application, cure 588-10K using a suitable curing compound from W. R. MEADOWS or in accordance with ACI 308. The 2200-WHITE series or 1100 series from W. R. MEADOWS are recommended. When conditions exist for rapid early water loss, the use of EVAPRE™ from W. R. MEADOWS is also recommended.

PRECAUTIONS

Do not use as a repair mortar. (Please contact W. R. MEADOWS for specific repair mortar recommendations.) Do not pre-mix in a ready-mix truck, either at batching plant or onsite.

TECHNICAL DATA

The following data was determined using the water amount for desired consistency as stated below per bag at 75˚ F (23˚ C).

Consistency per ASTM C827-95a Mix Ratio per 50 lb. (22.7 kg) bag Flow per ASTM C230-90 5 *Drops/Flow Table* Flow per ASTM C939-94a **Flow Cone**	**Plastic** 6.5 Pints (3.07 L) 110%	**Flowable** 7.25 Pints (3.43 L) 130%	**Fluid** 8.25 Pints (3.9 L) 26s
SET TIME per ASTM C191-92			
Initial Set	1 hr.	3 hrs.	5 hrs.
Final Set	3 hrs.	5 hrs.	7 hrs.
EXPANSION Age: 24 hours 3 days 7 days 28 days	 0.13% 0.16% 0.17% 0.17%	 0.10% 0.13% 0.13% 0.14%	 0.02% 0.04% 0.05% 0.06%
SHRINKAGE %	NONE	NONE	NONE
COMPRESSIVE STRENGTH			
AGE 1 day 3 days 7 days 28 days	**psi (MPa)** 5,500 (38) 6,500 (45) 7,500 (52) 11,000 (75)	**psi (MPa)** 4,500 (31) 5,500 (38) 6,500 (45) 9,200 (63)	**psi (MPa)** 3,500 (24) 4,500 (31) 5,500 (38) 8,200 (56)
All technical data is typical information, but will vary due to testing methods, conditions, procedures, batching variations, and raw materials variances.			

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.