ATLAS TECH-GROUT

Non-Shrink, Non-Metallic, High Strength Cement-Based Grout

Description

Atlas Tech-Grout is a blend of portland cement, natural aggregates and special additives to provide a non-shrink, non-metallic, non-corrosive, structural grout for multiple applications. Tech-Grout is a flowable and pumpable grout that will provide maximum bearing area for proper support and load transfer for column baseplates, machinery and equipment baseplates, precast & tilt-up panels, and other construction grouting applications. This high strength & versatile grout may be mixed to a range of consistencies, from dry-pack to fluid, to provide contractors with a quality, multi-use grout.

Uses

- Structural grouting of column baseplates.
- Support machinery, equipment and pump baseplates.
- Bedding grout for precast & tilt-up panels.
- Setting anchor bolts and dowels.
- Interior or exterior applications.

Features

- High-strength for heavy load stability.
- Non-metallic, will not stain or rust.
- Non-corrosive, does not contain calcium chloride.
- Controlled positive expansion for maximum bearing.
- Consistent performance; will not segregate.
- Versatile grouting, from dry-pack to fluid consistencies.
- Easy to pump.
- Can be molded and shaped.
- Can be extended with pea gravel for deep applications.

Technical Data & Specifications

ASTM C-1107, Grade A, B & C.
ASTM C-827 - Controlled positive expansion.
Corps of Engineers CRD C-621, Grade A, B & C.
Meets multiple DOT specifications & approvals.
City of Los Angeles approval. USDA Accepted.

Height Change / Expansion % ASTM C-1090*	Consistency		
	Plastic	Flowable	Fluid
1 Day	0.07	0.03	0.02
3 Days	0.07	0.03	0.02
7 Days	0.07	0.03	0.02
28 Days	0.07	0.03	0.02

Set Time ASTM C-266*		Consistency		
		Plastic	Flowable	Fluid
Initial	hours	2:00	4:00	6:00
Final	hours	4:00	5:30	7:00

* 73F (22C), 50% humidity. Above results obtained in a controlled labratory testing facility. Reasonable variation from test results in the field are expected, and should be controlled on the basis of the desired placing consistency, rather than strictly on water content.

Compressive Strength ASTM C-109*		Consistency			
		Dry-Pack	Plastic	Flowable	Fluid
1 Day	PSI (MPa)	6,000 (41.3)	4,000 (27.5)	3,000 (20.6)	1,500 (10.3)
3 Days	PSI (MPa)	7,000 (48.2)	5,200 (35.8)	4,800 (33.1)	3,700 (25.5)
7 Days	PSI (MPa)	8,800 (60.6)	7,800 (53.7)	6,800 (46.8)	6,000 (41.3)
28 Days	PSI (MPa)	11,400 (78.6)	10,000 (68.9)	8,100 (55.8)	7,200 (49.6)

Yield

Approximately 0.45 ft^3 per 50 lb. bag when mixed with 8.0 pints of water. At 1" thickness, one 50 lb. bag will cover approximately 5.4 ft^2. When one 50 lb. bag is mixed with 8.0 pints of water & 25 lbs. of 3/8" pea gravel, yield is approximately 0.59 ft^3.

Application Procedures

Preparation

Remove all dirt, oil and loose or foreign material from the surfaces to be grouted. Existing concrete surfaces should be strong and sound. If possible, roughen the surface to provide a good mechanical bond between the grout and the surface. Any metal in contact with the grout must be free of rust, oil, grease and other contaminants. Prior to placing grout, the surface should be saturated with water to provide a saturated-surface-dry (SSD) substrate. Keep the surface cool to avoid excess absorption from the grout. Do not apply grout over standing water or puddled areas. Bolts, baseplates and equipment must be secure and rigid before placement of grout.
During hot weather conditions (above 85^{0}F), refer to ACI 305 recommended practices for Hot Weather Concreting.
During cold weather conditions (below 50^{0}F), refer to ACI 306 recommended practices for Cold Weather Concreting.

Forming

For grouting machinery and column baseplates, follow standard forming procedures which permit complete and proper placement of flowable grout including the use of head forms. All forms must be securely anchored, shored, and sealed to prevent grout leakage. Wood forms which could absorb moisture should be pretreated with a form release agent, such as Atlas Release.
On the placement side, provide an angle in the forms high enough to assist grouting and to maintain head pressure on the grout during the entire process. On all sides, provide a 1" or greater horizontal clearance between the baseplate and forms. Forms should be at least 1" higher than the bottom of the baseplate.

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Atlas Tech-Grout

Mixing
For best results, Atlas recommends using mechanical mixers. For small jobs, use a 1/2" low speed drill with a mix paddle; for large jobs, use a grout or mortar mixer. Start with the minimum water requirements. Add 2/3 of required water to the mixer first, then slowly add the powder. While mixing, add additional water where required to achieve desired consistency. Mix until powder and water is a homogenous mass, usually 3 - 5 minutes. When ambient temperature is greater than 85^0 F (29^0 C), mix grout with cooler water that is approximately 40^0 F (4^0 C). When ambient temperature is below 50^0 F (10^0 C), mix grout with warmer water that is approximately 80^0 F (32^0 C).

The following mixing proportions are recommended for general use. Exact water ratio can fluctuate slightly for desired consistency depending on jobsite conditions, such as ambient & substrate temperatures, humidity, etc:

- Dry-Pack - 5.5 pints (0.68 gal) water per bag
- Plastic - 6.5 pints (0.81 gal.) water per bag
- Flowable - 7.5 pints (.94 gal.) water per bag
- Fluid - 8.0 pints (1.0 gal.) water per bag

For deep applications, a pre-washed, saturated surface dry 3/8" (1 cm) pea gravel should be added to the grout mix:

3" to 5" thickness	Add 15 lbs. per 50 lb. bag
Over 5" thickness	Add 25 lbs. per 50 lb. bag

When placing deeper than 5", it is recommended to place in 6" lifts and use proper reinforcement. Consult your Atlas Tech Products representative for additional information.

Application
Tech-Grout may be dry-packed with a rod or mallet or poured into place with buckets or manual or pneumatic pressure pumps. Place grout within 30 minutes of mixing. Place from one side, continuously and quickly to avoid air entrapment. Vent holes should be provided where necessary. When possible, grout bolt holes first. Fill the entire area. Do not over-work grout, do not vibrate grout. Remove forms only after grout has reached its final set. Exposed grout edges may be trimmed or shaped to meet the design profile. For best results, cut grout at a 45^0 angle from the lower edge of the baseplate.

Curing
Protect freshly placed grout from direct sun and wind. Exposed grout surfaces should be cured with a concrete curing compound, such as Atlas Res-Cure or Cure & Seal-14%, or with a 24 hour wet cure, using clean curing blankets or wet rags.

Cleaning
Clean tools and equipment with clean water. Uncured material may be removed with water. Cured material may be removed mechanically.

Packaging
50 lb. (22.7 kg) bags
Bag contains complete application instructions.

Storage
Store in a cool and dry area, out of direct sunlight.

Limitations
- Do not apply when ambient or surface temperature is below 40^0 F (4^0 C) or expected to fall below 40^0 F (4^0 C) within 24 hours of application.
- Do not retemper, do not over-water, and do not vibrate during placement.
- Do not add sand, cement, additives or admixtures without consulting Atlas.
- When ambient or surface temperature is below 50^0 F (10^0 C), water requirements should be field tested.

Caution
Contains portland cement and sand. Freshly mixed grout may cause skin irritation and possible cement burns. Avoid direct contact where possible, wash exposed skin area promptly with water. If any of the cementitious material gets into the eyes, rinse immediately and repeatedly with water and then call a physician. The manufacturer recommends using an approved mask or respirator when working with cementitious material. Do not take internally. Harmful if ingested. Keep out of the reach of children.

Additional precautions and safety information are contained in the Material Safety Data Sheet.

Technical Services
For assistance, contact an Atlas Tech representative at:
858-277-2100 or 1-877-588-2100
Fax: 858-277-0585
Email: info@atlastechproducts.com
Website: www.atlastechproducts.com

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Made in USA.
For professional use only.
Consult Material Safety Data Sheet for more information.

Disclaimer of Warranties: Neither manufacturer nor seller have any knowledge or control concerning the purchaser's use of the product. No expressed warranty is made by manufacturer or seller with respect to the results of any use of the product or container that the product comes in. No implied warranties including, but not limited to, an implied warranty of fitness for a particular purpose are made with respect to the product. Neither manufacturer nor seller assume any liability for personal injury, loss or damage resulting from the use of the product. In the event that the product shall prove defective, buyer's exclusive remedy shall be as follows: Seller or manufacturer shall, upon request of buyer, replace any quantity of the product which is proven to be defective or shall, at its option, refund the purchase price of the product upon return of the product. Manufacturer shall not be responsible for use of this product in a manner to infringe on any patent held by others.

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