

TECHNICAL DATA SHEET

DESCRIPTION

Turbo Grout LT 12 is a non-shrink, non-corrosive, non-metallic cementitious grout. Turbo Grout LT 12 is designed for use in cooler temperatures to provide faster set times and quicker strength gain than normal cement based non-shrink grouts. Turbo Grout LT 12 develops 12,000 psi (82.7 MPa) in 28 days even at temperatures as low as 35°F (1.7°C).

USE

Designed for the grouting of base plates for Wind Turbine towers, machinery and equipment base plates, columns, crane rails etc.

FEATURES

- Sets quickly, even in cooler temperatures
- Fast strength gain
- 13,500 psi (93 MPa) ultimate strength when placed at 40°F (4.4°C) and cured at 70°F (21.1°C) for 28 days
- Non-metallic/non-corrosive
- Plastic or flowable consistency
- Can be installed in temperatures as low as 35°F (1.7°C).

PROPERTIES

Expansion (ASTM C-1090):

1 day-0-0.3

3 days-0-0.3

14 days-0-0.3

28 days-0-0.3

Set Times (ASTM C 266): @ 35°F (1.7°C)

Approximately 30 minutes work time

Initial set: > 50 minutes

Final set: < 60 minutes

Meets the requirements of ASTM C1107 placed at 35 to 40°F (1.7 – 4.4°C) @ flowable consistency.

Test Results

Flowable Consistency. ASTM C109 modified per ASTM C1107. Turbo Grout LT12 conditioned at 35°F-40°F (1.7-4.4°C)

	1 Day		3 Days		7 Days		28 Days	
Cure Temp.	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa
35°-40°F (1.7°-4.4°C)	6,500	44.8	8,000	55.2	11,000	75.8	12,000	82.7
70°-75°F (21.1°-23.9°C)	7,000	48.3	10,000	68.9	11,750	81.0	13,500	93.1

Note:

The data shown is typical for controlled laboratory conditions. Reasonable variation from these results can be expected due to inter-laboratory precision and bias. When testing the field mixed material, other factors such as variations in mixing, water content, temperature and curing conditions should be considered.

Estimating Guide

Yield: 0.41 cu. ft. /50 lbs (0.011 cu m /22.7 kg) bag

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		LBS	KG
309013	Bag	50	22.67

STORAGE

Store in a cool, dry area free from direct sunlight. Shelf life of unopened bags, when stored in a dry facility is 12 months. Excessive temperature differential and/or high humidity can shorten the shelf life expectancy.

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 35°F (1.7°C) and 70°F (21.1°C) before grouting and during curing period. 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 in. (2.5 cm) higher than the bottom of the base plate.

Water Requirements:

Plastic: 4.5-5.0 pints (2.1 - 2.4 L) - water / per 50 lbs (22.7kg)

Flowable: 5.5 pints (2.6 L) per 50 lbs (22.7kg)

Mixing

For easier placement precondition Turbo Grout LT12 between 35°F (1.7°C) to 50°F (10°C). Temperatures above 50°F (10°C) will greatly decrease the pot life and work times.

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A mechanical mixer with rotating blades like a mortar mixer is best. Small quantities can be mixed with a drill and paddle. When mixing less than a full bag, always first agitate the bag thoroughly so that a representative sample is obtained. Place approximately 3/4 of the anticipated mix water into the mixer and add the grout mix, adding the minimum additional water necessary to achieve desired consistency.

Mix for a total of five minutes ensuring uniform consistency. For placements greater in depth than 3 in. (7.6 cm), up to 25 lbs. (11.34 kg) of washed 3/8 in. (1 cm) pea gravel must be added to each 50 lbs. (22.7 kg) bag of grout. The approximate working time (pot life) is 30 minutes. This will vary somewhat with ambient conditions. * For large area placements or depths exceeding 6", call Dayton Superior Technical Services.

Placement:

Grout should be placed preferably from one side using a grout box to avoid entrapping air. 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). Cooler temperatures require longer curing periods. Forms may be removed when grout is completely selfsupporting. 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.

APPEARANCE

Installation

When used with the D492 Sleeve-Lock[®] Coupler: For pre-grouting placements, pour or pump grout in a continuous operation into the sleeve, rodding continuously to remove entrapped air. For post grouting placements, pour or pump grout into inlet tubes in a continuous operation. Continue pumping until grout exiting at the outlet tube flows freely with no air bubbles. Seal the outlet tube 1st, followed by sealing the inlet tube. Inspect and verify after grouting to ensure no voids exist

CURING

Exposed grout surfaces must be cured. Dayton Superior recommends using a Dayton Superior curing compound, cure & seal or a wet cure for 3 days. Maintain the temperature of the grout and contact area at 35°F (1.7°C) for a minimum of 8 hours.

CLEAN UP

Use clean water. Hardened material will require mechanical removal methods.

LIMITATIONS

FOR PROFESSIONAL USE ONLY

Do not re-temper after initial mixing.
Do not add other cements or additives.
Do not mix more than can be placed in 15 minutes @ temperatures above 50°F (10°C). Temperatures above 50°F (10°C) will greatly decrease the pot life and work times.
Prepackaged material segregates while in the bag, thus when mixing less than a full bag it is recommended to first agitate the bag to assure it is blended prior to sampling.

PRECAUTIONS

READ SDS PRIOR TO USING PRODUCT

- Product contains Crystalline Silica and Portland Cement – Avoid breathing dust – Silica may cause serious lung problems
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

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- Grout should be placed so as to avoid entrapped air pockets. Grout should not be over-worked causing segregation. Vent holes should be provided where necessary. Forms must be sealed to prevent water or grout loss. 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 3-4 hours after grout placement. Due to fast set times, use only short hose lengths when pumping.

MANUFACTURER

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WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.