

TECHNICAL DATA SHEET

DESCRIPTION

Turbo Grout HP[®] 12 is a non-shrink, non-corrosive, non-metallic cementitious grout. Turbo Grout HP 12 is designed to provide a controlled, positive expansion to ensure an excellent bearing area and can be mixed from a plastic consistency to a flowable consistency. The Turbo Grout HP 12 develops 12,000 -14,000 psi (82.7 - 96.6 MPa) in 28 days.

USE

Turbo Grout HP 12 is an ideal product for grouting wind turbine towers, structural column base plates, machinery bases, anchoring bolts, dowels, bearing pads, keyway joints, crane rails etc.

FEATURES

- Develops high compressive strength quickly
- Less downtime for machines/finish projects sooner
- High ultimate compressive strength
- Non-metallic/non-corrosive
- High density
- Low water requirements
- Interior/exterior applications

PROPERTIES

Meets Corps of Engineers Specification for non-shrink grout (CRD-C 621)

Meets ASTM C-1107: Specification for non-shrink grout

ASTM C-827: Yielded a controlled positive expansion meeting the specification

Expansion - ASTM C-1090

1 day-0-0.3

3 days-0-0.3

14 days-0-0.3

28 days-0-0.3

Test Results – ASTM C-1107

Compressive Strength @72F

	1 Day	3 Days	7 Days	28 Days
Fluidity				
Plastic	10,000 (68.9 MPa)	10,800 (74.4 MPa)	11,800 (81.3 MPa)	13,500 (93 MPa)
Flowable	8,500 (58.6 MPa)	10,100 (69.6 MPa)	11,000 (75.8 MPa)	12,000 (89.6 MPa)

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:

0.42 cu. ft./50 lbs. (0.011 cu. m/22.7 kg) bag

0.57 cu. ft/50 lbs. (0.015 cu. m/22.7 kg) bag extended with 25 lbs. (11.34 kg) of washed 3/8 in. (1 cm) pea gravel

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		lbs	kg
309021	Bag	50	22.7

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 45°F (7°C) and 90°F (32°C) before grouting and during curing period.

All surfaces to be grouted should be in a saturated surface-dry (SSD) condition with no standing water on the surface. Thoroughly wet concrete contact area prior to grouting, keep wet and remove all surface water just prior to placement.

For base plate grouting, seal forms to prevent water or grout loss. Surface preparation in accordance with ACI is recommended. On the placement side, provide an angle in the form or headbox 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.

TECHNICAL DATA SHEET**Water Requirements:**

Plastic mix: 6 pints (2.8 L) water / 50 lbs. (22.7 kg) bag

Flowable mix: 7 pints (3.3 L) water / 50 lbs. (22.7 kg) bag

Mixing

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. * For large area placements or depths exceeding 6", call Dayton Superior Technical Services.

The approximate working time (pot life) is 30 minutes but will vary somewhat with ambient conditions. For hot weather conditions, greater than 85°F (29°C), mix with cold water approximately 40°F (4°C). For cold weather conditions, less than 50°F (10°C), mix with warm water, approximately 90°F (32°C). For additional hot and cold weather applications, contact Dayton Superior.

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.

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 45°F (7°C) to 90°F (32°C) for a minimum of 24 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.
Setting time for the Turbo Grout HP 12 will slow during cooler weather, less than 50°F (10°C) and speed up during hot weather, greater than 80°F (27°C).
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

MANUFACTURER

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TECHNICAL DATA SHEET**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.