



TECHNY CHEMY

TEC[®] GROUT NS/HS

Non-Shrink, Free Flow, Normal Strength and
High Strength cementitious Grouts



KEY BENEFITS AND FEATURES

- Selectively graded aggregates blended with select additives to compensate plastic shrinkage and achieve exceptional strength.
- Premixed, Single component- only requires addition of water to obtain free flowing consistency.
- Extreme flowability ensures adequate access to all parts of foundation base and pockets.
- Controlled expansion affords excellent dimensional stability ensuring exceptional contact with the foundation.
- Cures to form an intense and impervious base ensuring high performance over a prolonged period of operation of plant and machinery mounted.
- Free of metals and chloride hence prevents corrosion.
- Increased early strength gain vastly reduces downtime for maintenance based repairs.
- High ultimate strength ensures long term durability.

Usage

- Wide range of applications including grouting of machine base plates, anchor bolts and re-bar anchoring.
- Effective for grouting in both static and dynamic loading conditions.
- Efficient as a grouting medium for anchoring of crane girders.
- Useful for grouting in pre-cast concrete members.
- Ideal for use in emergency repairs and early commissioning.
- High Strength version Tec[®] Grout HS is used dynamic loading applications like grouting base plates of Turbines.
- Tec[®] Grout HS can also be used for grouting of bolts in generators, boiler feed pumps and similar applications.

DIRECTIONS FOR USE

Surface Preparation: All surfaces coming in contact with grout must be free of dirt, oil, grime, curing compounds and other contaminants. Concrete surface should be roughened to improve bond. Surface should be saturated with water for several hours prior to placement. Surface should be saturated surface dry (SSD) with no ponding immediately prior to placement of grout.

Form Preparation: All forms should be treated with -Tec[®] Release MA- Mould Release compound. Forms should be caulked at all seams which can be done with a trowelable consistency grout or a caulking compound.

Mixing: Always use potable water. Large grout quantities should always be mixed in a paddle blade mortar mixer. Small quantities can be mixed with a ½" (1.3 cm) drill with a jiffy mixer. Always place water into the mixer before adding grout to the mix. After initial mixing, add the prescribed water as needed until reaching the desired consistency. Mix time should be typically 4 minutes to 5 minutes. Only quantity that can be placed in 10-15 minutes should be mixed in each batch. For thicknesses above 100mm Tec[®] Grout NS/HS should be blended with 10-12mm aggregate to ensure reduction in heat generation.

Placement: Grout can be placed by hand or pump. Hand placement should be by one continuous flow from one side of the area to be grouted. Venting in the base plate can avoid trapping of air. Vibrating of grouts should be avoided. Pumping grout in place is desirable on larger placements and should be done in an uninterrupted, continuous process.

Curing: Grout Must be cured immediately after placement and striking it off. Tec[®] Cure WB is recommended as the curing compound. Proper curing minimizes surface dusting, checking and cracking. Leave forms in place as long as possible to take advantage of the forms for an excellent cure. Proper curing is extremely imperative.

Hot Weather Grouting

Temperatures above 85° F (29° C) require special hot weather procedures. First, try to keep the bags of grout in the shade with the plastic shrink wrap removed. Use cool water for mixing. Water can be cooled with ice, make sure the ice is not mixed with grout. A fine screen can be used to filter out the ice when pouring the mix water.

It is even more critical during hot weather to keep the grout base saturated with water for several hours in advance. The metal base plate should be cooled, and this can be accomplished with burlap or towels. If possible, create shade for the area to be grouted.

During pumping applications, attempt to keep the pumping lines cooled, especially with long lines. This can be accomplished with wet towels or rags. Also, prior to priming the pump with cement slurry, pumping cold water through the lines will cool the lines.

The ideal time of day for hot weather grouting is late in the day, not early in the morning. This allows the grout to initially cure during the cool evening hours.

Hot weather will reduce the working time of the grout, thus smaller batches may be required.



Certified:
ISO 9001 (QMS) & ISO
14001 (EMS)



Cold Weather Grouting

Cold weather grouting is defined as temperatures less than 45° F (7° C). The primary concern when grouting in cold weather is the ability of the grout to set and hydrate adequately. Because water freezes at 32° F (0° C), hydration stops at this point. It is therefore important to keep the grout above this temperature.

Setting time for grouts increases proportionally with decreasing temperature, resulting in drastically lower compressive strengths for a given period of time. If temperatures can be maintained above the freezing point, significant improvements in strength gain can be realized.

Maintain grout and water temperatures as high as reasonably possible prior to grouting. The easiest method is to keep the grout indoors in a heated area until time of use. Use preheated or room temperature water if possible. Water temperature should be above 65° F (18° C), but not greater than 95° F (35° C). Additionally, preheat the area to be grouted, including as large an area around the grout placement as possible. Gas-fired heaters are permitted for heating grouting areas, but must be removed after grouting has commenced. Infrared heaters can be used for warming the area prior to placement and after the grouting is finished. If nothing else, presoak the area with warm water for as long as possible prior to grouting. Insulating the area for as long as possible prior to grouting is also beneficial.

Use only as much mix water as necessary to achieve a usable consistency. Once the grout is in place, it is very important to cure. Tec[®] Cure WB is recommended for this purpose.

Last, is temperature maintenance after placement. Simply stated, the warmer, the better. Setting time will be decreased and adequate hydration will be achieved with warmer temperatures. Temperature maintenance can be accomplished in several ways: Place the grout early in the morning to take full advantage of the daytime temperature increase.

Insulate, cover and apply heat if possible. Remember to cure, particularly when employing heat. Layers of straw, canvas, insulating blankets, etc. can be used for insulation. Grout has a naturally occurring heat of hydration that will help if proper insulating and protective techniques are used. The use of enclosures and infrared heaters is an excellent method of maintaining a warm environment.

The above warming methods should be employed for a minimum of 24 hours after grouting or until a specified design strength is achieved.

Technical Data: Tec[®] Grout NS

Physical State	Powder			
Grain Size	0-3mm			
Yield	(50 Kg bag of grout when mixed with 6-8 lts of water).			25-28Lts
Compressive Strength:	1 Day	3 Days	7 Days	28 Days
	10 N/mm ²	27 N/mm ²	36 N/mm ²	45 N/mm ²
Linear Expansion :	Un-restrained		Restrained	
	0.25%		0.15%	
Storage	Store in cool, dry location			
Shelf Life	Maximum of 1 year from date of manufacture in unopened package			

Technical Data: Tec[®] Grout HS

Physical State	Powder			
Grain Size	0-3mm			
Yield	(of one 50 Kg bag of grout when mixed with 6-8lts of water.			25-28Lts
Compressive Strength:	1 Day	3 Days	7 Days	28 Days
	30 N/mm ²	40 N/mm ²	50 N/mm ²	65 N/mm ²
Linear Expansion :	Un-restrained		Restrained	
	0.35%		0.20%	
Storage	Store in cool, dry location			
Shelf Life	Maximum of 1 year from date of manufacture in unopened package			
Colour	Grey			

Packaging

Available in: 50Kgs HDPE bags.

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TECHNICAL DATA SHEET
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