

Product Description

Techno DynoGrout PG1 is a cement based non-metallic, non-shrink, free flow grout supplied as a dry powder. Techno DynaGrout PG 1 is ideal for general construction grouting applications.

Techno DynoGrout PG1 is a blend of Portland cement, graded fillers and chemical additives which impart controlled expansion in the plastic state whilst minimising water demand.

Uses

Techno DynoGrout PG1 is used for the installation of structural stanchion base plates, bridge bearings, bolt baskets and all other areas requiring precision grouting. Can be used for grouting precast joints and tie holes with adjustable consistency. Installing anchors, dowels and reinforcing bars.

Advantages

- Ready to use, requires only addition of water
- Highly flowable and self leveling
- Ensures highest, effective bearing area
- High strength. Good dimensional stability
- High strength ensure the durability of the hardened grout
- No bleeding or segregation



Properties

Compressive strength : (BS1881 : Part 116, 1983)

	Compressive strength (N/mm ²) consistency (W/P - 0.19)
Age(days)	Flowable
1	10
3	27
7	35
28	45

Compressive strength with addition of aggregates

Age (days)	Compressive strength (N/mm ²) (W/P 0.19)		
	Aggregate by weight		
	50%	75%	100%
1	12	14	16
3	29	32	34
7	38	40	44
28	48	50	53

Note : Cubes cast were kept under resistant before testing to simulate site condition. Size of the cubes used 70.6mm x 70.6mm x 70.6mm tested at 30 °C.

Young's modulus : 24 kN/mm²

Expansion characteristics : Controlled expansion occurs in the unset material to ensure that the grout, when cured, will continue to occupy its original volume within the confines of the voids in which it has placed.

Unrestrained expansion : 1 to 4%

Time of expansion : Starts 20 minutes
Finish 150 minutes

Pressure to restrain : Approx. 0.004 N/mm²
plastic expansion

Note : It is necessary to restrain free flow grout edges over 50mm wide. Otherwise unrestrained expansion may lead to some cracks.

Coefficient of thermal expansion : 11x10⁻⁶ per °C

Thermal conductivity : 1.04 W/m °C

Fresh wet density : At flowable consistency
2170 kg/m³

Water powder ratio : Consistency W/P Water
required per 25 kg bag

Flowable 0.19 4.75 litres Unrestrained expansion 2 - 4 %

Specification Clauses

Performance specification

It shall be mixed with clean water to the required consistency. The grout must not bleed or segregate.

A positive volumetric expansion shall occur while the grout is plastic by means of gaseous system.

Typical detail of stanchion base plate

The compressive strength of the grout must exceed 50 N/mm² at 7 days and 70 N/mm² at 28 days.

The flexural strength of grout must exceed 8N/mm² @ 28 days. The fresh wet density of the mixed grout must exceed 2150 kg/m³

Application Guidelines

Surface Preparation

The substrate surface must be free from oil, grease or any other contaminants. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or debris. Concrete must be clean, sound and roughened to ensure a good bond.

Pre-soaking

Soak concrete for 8 to 24 hours prior to placing, the concrete substrates should be saturated with fresh water. Immediately before grouting takes place any free water should be removed with particular care being taken in all bolt holes and pockets.

Formwork

The formwork should be constructed to be leakproof. This can be achieved by using foam rubber strip beneath the constructed formwork and between joints. In some cases it is practical to use a sacrificial semi-dry sand and cement formwork. The formwork should include outlets for pre-soaking.

Unrestrained surface area

This must be kept to a minimum. Generally the gap width between the perimeter formwork and the plate edge should not exceed 150mm on the pouring side and 50mm on the opposite side. It is advisable, where practical, to have no gap at the flank sides.

Mixing

For best results a mechanically powered should be used. When quantities up to 50kg heavy duty slow speed (400-500rpm) drill & paddle mixer. Larger quantities will require a heavy duty mixer. To enable the grouting operation to be carried out continuously, it is essential that sufficient mixing capacity and labour are available. The use of a grout holding tank with provision to gently agitate the grout may be required for larger pours.

Consistency of grout mix

The quantity of clean water required to be added to a 25kg bag to achieve the desired consistency is given below :
Pourable : 4.000 litres

For enhanced flowable properties in higher temperature conditions, ice water prepared of ice bergs placed in water tanks is preferred.

The selected water content should be accurately measured into the mixer. The total content of the Techno DynoGrout PG1 bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Placing

At 30°C place the grout within 20 minutes of mixing to gain full benefit of the expansion process.

Any bolt pockets must be grouted prior to grouting between the substrate and the base plate. Continuous grout flow is essential. Sufficient grout must be prepared before starting. The time taken to pour a batch must be regulated to the time to prepare the next one.

Follow good grouting practices as prescribed by company

Packaging

Techno DynoGrout PG1 is supplied in 25 kg moisture resistant bags

Yield : 13.4ltrs @ 0.16 W/P ratio

Storage

Shelf life

Techno DynoGrout PG1 has a shelf life of 9 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations, the shelf life may be reduced.

Precautions

Health and Safety

Techno DynoGrout PG1 is alkaline and should not come into contact with skin and eyes. Inhalation of dust during mixing should be avoided. Gloves, goggles and dust mask should be worn. If contact with skin occurs, it shall be washed with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

Fire

Techno DynoGrout PG1 is non flammable

Important: Technokem products are guaranteed against defective materials and are sold subject to its standard terms and conditions of sale. It is the Customer's responsibility to satisfy themselves by checking with the Company whether the information is still current at the time of use. The customer must be satisfied that the product is suitable for the use intended. All products comply with the properties shown on current Technical Literatures. However, Technokem does not warrant or guarantee the installation of the products as it does not have any control over installation or end use of the product. All information and particularly the recommendation relating to application and end use are given in good faith.

For Complaints/Suggestions:

Please write to our Customer Care Executive at

TechnoKem Manufactures of Construction Chemicals

#301, Krishna Classic, Road No.17,
Plot No. 51, Sardar Patel Nagar,
Kukatpally, Hyderabad - 500085,
Off: 040 - 29559256



info@technokem.com
www.technokem.com

An ISO: 9001: 2015 Accredited Company