

TIKIGROUT 45-CEM

Non-Shrink Free Flow Cementitious Precision grout

DESCRIPTION

It is a ready to use non-shrink, free flow cementitious precision grout, supplied in dry powder form.

It is specially formulated for critical grouting application where high strength, high tolerance and fluidity are required beneath the load bearing units where static loads are present. It comprises of hydraulic setting binders, select grade fillers and expansion controlling additive that needs only addition of the requisite quantity of clean water at site while maintaining prescribed water to powder ratio.

ADVANTAGES

- High early and ultimate strengths.
- High fluidity eliminates need for external machine for compaction.
- Effectively transfers loads and vibrations to the machine foundation.
- Durable performance under continues static load.
- Good resistant to corrosive salts and seawater.
- Non-metallic and chloride free, hence non-corrosive and non-staining.
- Positive controlled expansion compensates for plastic shrinkage and settlement ensuring 100% contact with surfaces & good bond development.

USES

TIKIGROUT 45-CEM grout is use for precision grouting of base plates of heavy machineries and anchoring wide range of mechanical fixture, such as:

- Standing equipment bed plates of heavy machinery and equipment foundation, compressors, pumps, boilers, steel rolling mill, etc.
- Structural columns in pre-cast construction.
- Filling cavities, gaps and recesses.
- Crane and rail construction.

MIXING

Add 90% of required water to mixer and gradually add

- Anchoring of masts, anchor bolts, fence posts.

PROPERTIES*

Property @ 28°C	Value
Compressive Strength (tested for w/p = 0.14)	
1 Day	≥10 mPa
7 Days	≥30 mPa
28 Days	≥40 mPa
Mix Density	2,150 ± 50 Kg. /m ³
Bulk Density (Tapped) of Powder	1,400 Kg. /m ³
Initial Setting Time	≈4 Hours
Final Setting Time	≈5 Hours
Water/Powder Ratio	0.19 (5.7 litres of water is required for 30 Kg. of grout powder to produce flowable consistencies)
Unrestrained Expansion	1% to 4% in plastic state
Restrained Expansion	0.15% to 0.40% @28 Day

*The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown may result from field trials.

PLACEMENT GUIDELINES

SURFACE PREPARATION

All surfaces in contact with **TIKIGROUT 45-CEM** should be free of oil, grease, laitance and other contaminants.

Concrete must be clean, sound and roughened to ensure a good bond. It is recommended to pre-soak / saturate the concrete surfaces with clean water for at least 2 hours prior to application of grout. Any standing water prior to grouting should be wiped-off.

Bolts, base plates and grout pockets must be clean free from loose rust, oil, grease and dust. Shuttering should be leak-proof.

Use of concrete mixer is recommended to prepare

TIKIGROUT 45-CEM powder while mixing thoroughly for approximately 2 to 3 minutes to a uniform consistency using a grout / mortar mixer (stationary barrel with moving blades). Mixing using a drill and paddle mixer is also acceptable for single bag mixes.

Finally add balance 10% of water and continue mixing for next 2 to 3 minutes.

Do not re-temper the mix by adding additional water or exceed the recommended water to powder ratio, otherwise it may result in bleeding & segregation of mix.

METHODS OF PLACEMENT

The prepared grout mix can be poured in to place through a flexible tube or pipe of minimum 50mm diameter. Always pour the grout from one end to prevent entrapment of air in the mix. Use the mixed grout within 20 minutes of mixing. Ensure that the grouting operation is carried out continuously for better performance.

For large pour, the grout mix can be placed through a removable hopper formwork or pumped in to place from one end. Proper head should be maintained during grouting so that it flows freely and a continuous grout front is achieved. Cavities should be filled first (up to around just below the top edge) and then the machine plate or similar.

TIKIGROUT 45-CEM can be placed in 25mm to 100mm thickness in single pour. For placement in higher thicknesses than that recommended, addition of silt-free rounded well graded aggregate (2mm to 20mm grading) @ 50% to 100% by weight of grout powder is recommended.

Cured material can be removed mechanically or by using acid-etching process.

SUPPLY

the grout mix when it is extended with rounded aggregate.

The grout should be applied to be flush with bearing plate, provided with a 45° edge using formwork or cut-off flush with the bearing plate before it has set. This is to prevent stresses from becoming superimposed on one another and protect the installation.

High points must be adequately vented to allow entrapped air to escape.

POST-PLACEMENT CURING

The hardened grout should be kept continuously wet for at least three days and further cured by applying curing compound **TIKICURE WB**.

LIMITATION

Never use grout as a patch repair material or as overlay in unconfined areas (horizontal, un-restrained applications).

Non-Shrink property of grout will be effective only if the material is not subjected to water loss through joints of formwork.

YIELD

30 Kg. pack of **TIKIGROUT 45-CEM** when mixed with water at water/powder ratio of 0.19, would yield 16.50 litres grout at flowable consistency. Allowance should be made for wastage while estimating the quantities required.

CLEANING

The tools and equipment use for mixing and placing the grout should be immediately cleaned with clean water.

SAFETY PRECAUTIONS

As with all chemical products, care should be taken

TIKIGROUT 45-CEM is supplied in 30 Kg., pack size.

STORAGE

TIKIGROUT 45-CEM must be stored above 5°C. Store under the shed & protect from extremes of temperature, heat, direct sunlight. The shelf life is 6 months in sealed unopened packing.

during use and storage. This product becomes alkaline when mixed with water, avoid contact with skin, eyes, mouth and food. For further detail, refer to Material Safety Data Sheet.

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