

MAXGROUT[®] TR FILL

High Strength, Non-Shrink, Cementitious Grout for Tie Rod Hole Applications



Maxgrout[®] TR Fill is a cement-based, non-metallic, non-shrink, dual expansion, consistency controlled grout supplied as a dry powder. Maxgrout[®] TR Fill has excellent paste like consistency to effectively fill in tie rod holes.

Maxgrout[®] TR Fill is a blend of Portland cement, graded fillers and chemical additives which impart controlled expansion in the plastic state while minimizing water demand. The low water demand ensures high early strength. The graded fillers are designed to assist uniform mixing and produce a consistent grout.



Uses

- Maxgrout[®] TR Fill is used for filling the tie rod holes.
- Used in to fill bolt pockets and all other areas requiring grouting.
- Can be used for filling precast joint sand tie holes with adjustable consistency.
- Can be used for reinstating damaged structural elements by placing formwork.
- Can be used for anchoring bolts in rocky strata.

Benefits

- Ready to use, requires only addition of water.
- Able to fill, intricate voids.
- High early strength without the use of chlorides.
- High strength ensures the durability of the hardened grout.
- No bleeding or segregation.
- Compensates for shrinkage in both plastic and hardened states.
- No metallic iron content to cause staining/corrosion.
- The expansion system ensures dimensional stability by offsetting shrinkage.

Technical Support

An experienced technical advisory team is available to give technical service on request.

Properties

W:P Ratio	0.15-0.17 (Depending upon site conditions)
Compressive Strength in N/mm²	38-42 @ 28 days
	32-36 @ 7 days
	24-30 @ 3 days
Bulk Density	1.4-1.5 gm/cc
Wet Density	2.16-2.26 gm/cc
Dropping Table Flow	120-160 mm

Specification Clauses

Performance Specification

All grouting shown on the drawing must be carried out with are packed cement based product which is chloride free. It shall be mixed with clean water to the required consistency. The grout must not bleed or segregate.

The compressive strength of the grout must exceed 38 N/mm² at 28 days. Fresh wet density of the mixed grout must exceed 2.16 gm/cc. The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

Instructions for Use

Preparation

Foundation surface

The substrate surface must be free from oil, grease or any loosely adherent material. 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 cleaned of any debris.

Pre-Soaking

Several 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 to blow out all bolt holes and pockets.

Mixing

For best results a mechanically powered grout mixer should be used. When quantities up to 50kg are used, a heavy duty slow speed drill (400-500 rpm) fitted with a paddle is suitable. 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 should be available.

Consistency of Grout Mix

The quantity of clean water required to be added to a 30 kg bag to achieve the desired consistency is according to the water powder ratio mentioned.

The selected water content should be accurately measured into the mixer. The total content of the Maxgrout[®] TR Fill 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

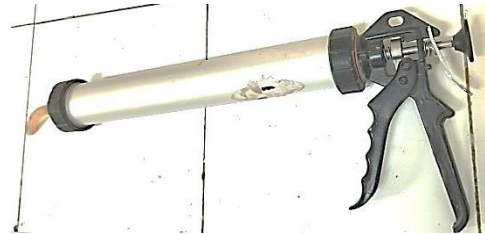
At 30°C place the grout within 20 minutes of mixing to gain full benefit of the expansion process. Maxgrout[®] TR Fill can be placed in layers. For thicker sections it is necessary to fill out Maxgrout[®] TR Fill with well graded silt free washed and SSD condition aggregate to minimize heat build-up.

Typically a 5-10mm aggregate is suitable. 50-100% aggregate by weight of Maxgrout[®] TR Fill can be added. And sufficient grout must be prepared before starting. The time taken to place a batch must be regulated to the time to prepare the next one.

Application is recommended to be done using a gun as shown in the image below. This ensures that the grout reaches the insides of the crevices and voids effectively.

Application can also be carried out by trowel. Apply the first layer by gloved hand and then firmly trowel on the rest to

required thickness. When applying by hand force BS 5F tightly onto the substrate to ensure intimate contact with the pre-wetted substrate.



Curing

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Maxcure[®] CC 75 curing membrane and/or wet hessian.

Limitations

- **Low Temperature Working:** Warm water for grouting is recommended when contact surface temperatures are 10°C and below to accelerate strength development. Formwork should be kept in place for minimum 36 hours.
- **High Temperature Working:** At ambient temperature of 40°C and above cold water (below 20°C) should be used for mixing.

Health and Safety Instructions

Maxgrout[®] TR Fill 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 clean water. Splashes to eyes should be washed immediately.

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with plenty of clean water and medical advice sought.

Fire

Maxgrout[®] TR Fill is non-flammable.

Storage

Shelf Life

Maxgrout[®] TR Fill has a shelf life of 6 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.

Yield

A 30kg bag of Maxgrout[®] TR Fill yields 13.5 litres.

Packing

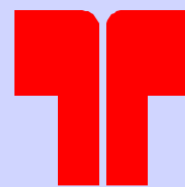
Maxgrout[®] TR Fill is supplied in 30 kg moisture resistant bags.

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

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