

MAXGROUT[®] 80

Free Flow, High Strength, Dual Shrinkage Compensation Grout



Maxgrout[®] 80 is supplied as already to use dry powder. The addition of a controlled amount of clean water produces a free flowing, non-shrink grout for gap thickness upto 100mm.

Maxgrout[®] 80 is a blend of portland cement, graded fillers and chemical additives which imparts non shrink properties while minimizing water demand. The formulation ensures early high strength. The graded filler is designed to assist uniform mixing and produce a consistent grout.

Uses

Maxgrout[®] 80 is used for special grouting where it is essential to have fast setting and high early strength. It can also be used for grouting/fixing glass or metallic railings in concrete.

Benefits

- Non-shrink
- Quick setting
- No metallic iron content to cause staining
- Pre-packed material overcomes onsite matching variations
- Develops high early strength without use of chlorides
- High ultimate strength and low permeability ensures the durability of hardened grout
- Free flow ensures high level of contact with load bearing area.

Technical Support

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

Properties

Setting Time at 30°C	
Initial	6-8 hours
Final	<10 hours
Flow on BS Cone after mixing	270 mm
Contact Area	>95%
Unrestrained Expansion (ASTM C 827)	1-4%
Coefficient of Thermal Expansion	11×10^{-6} per °C
Hardened Expansion	Conforms to ASTM C 1107

Compressive Strength (BS 1881: Part 116, 1983)	
Age (Days)	Compressive Strength (N/mm ²) Consistency (W/P-0.16) Flowable
1	40
3	60
7	70
28	80

Age	Flexural Strength (BS 4551)	Tensile Strength (ASTM C307)
7	9	2.5
28	10	3.5

Pullout Bond Strength (W/P- 0.16)	17 N/mm ² at 7 days
Fresh Wet Density	2.25-2.30 gm/cc
Modulus of Elasticity (ASTM C 469)	>28 N/mm ²
Dynamic Load Resistance	Specimens of Maxgrout [®] 80 remained undamaged even after subjecting them to alternate loads of 5 N/mm ² & 25 N/mm ² at the rate of 500 cycles /minute for two million cycles.

Instructions for Use

Surface 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 laitence, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or 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.

Form Work

The form work should be constructed to be leak-proof. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed form work and between joints.

In some cases it is practical to use a sacrificial semi-dry sand and cement form work. The form work should include outlets for pre-soaking.

Unrestrained Surface Area

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

Mixing and Placing

Mixing

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

Note: When required to grout at high ambient temperatures, Thermax recommends usage of cold water maintained at 5°C.

Consistency of Grout Mix

The quantity of clean water required to be added to a 30 kg bag to achieve the desired consistency is given below:

Consistency	W/P Ratio	Water Required for 30kg Bag
Flowable	0.16	4.8

The selected water content should be accurately measured into the mixer. The total content of the Maxgrout[®] 80 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 10 minutes of mixing. Maxgrout[®] 80 can be placed in thicknesses up to 100mm in a single pour.

For thicker sections it is necessary to fill out Maxgrout[®] 80 with well graded silt free aggregate to minimize heat build-up. Typically a 5-10 mm aggregates is suitable. 50 - 100% aggregate weight of Maxgrout[®] 80 can be added depending on the thickness to be applied.

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.

The uniformly mixed grout should be placed using a suitable grout pump.

Curing

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

Cleaning

Maxgrout[®] 80 should be removed from tools and equipment with clean water immediately after use.

Limitations

Low Temperature Working

When the air or contact surface are 10°C or below on a falling thermometer, the strength development may be low. Normal precautions for winter working with cementitious materials should then be adopted.

High Temperature Working

At ambient temperature above 35°C, cool water (below 20°C) should be used for mixing the grout prior to placement. Otherwise pot life of the mixed material will be reduced.

MAXGROUT[®] 80

Health and Safety Instructions

Maxgrout[®] 80 is alkaline and should not come in contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

Fire

Maxgrout[®] 80 is non-flammable.

Storage

Shelf Life

6 months if stored in a dry store in sealed bags. If stored in high temperature and high humidity locations, the shelf life may be reduced.

Packing

Maxgrout[®] 80 is supplied in 30kg moisture resistant bags.

Yield

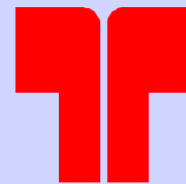
Allowances should be made for wastage when estimating quantities required. The approximate yield per 30 kg bag is 15 ltrs (for flowable consistency).

Other Segments:

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

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THERMAX

Thermax Limited
Environment House, Plot No.90-92
BG Block, MIDC, Bhosari,
Pune 411 026, India.
Tel: +91-20-67156000
Fax: +91-20-27120206
Customer Care: 18002090115 (India
toll free)
Email : enquiry@thermaxglobal.com

Ahmedabad

Tel: +91-79-26575408 • Fax: +91-79-65577270

Bengaluru

Tel: +91-80-22371721 • Fax: +91-80-22371726

Chennai

Tel: +91-44-24303400 • Fax: +91-44-24353841

Delhi

Tel: +91-11- 46087200 • Fax: +91-11- 26145311

Hyderabad

Tel: +91-40-23253700 • Fax: +91-40-23253799

Kolkata

Tel: +91-33-66070800 • Fax: +91-33-66070999

Mumbai

Tel: +91-22-67542222 • Fax: +91-22-22040859

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UK, USA, UAE, Germany, Belgium, Denmark,
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