

6.06 FAST EXPAND

Plasticized Expanding Grout Admixture

PRODUCT DESCRIPTION

FAST EXPAND GROUT is an admixture for cementitious grouts where reduced water/cement ratio and positive expansion is required. The EXP. agent, by generating gas during the hydration process before the initial set takes place, counteracts the natural settlement and shrinkage of the grout. The Plasticizing agent enables high workability mixes to be produced with relatively low water/cement ratios stability and cohesion of the grout are greatly increased. The expansion is controlled to avoid excess being built up.

PRIMARY APPLICATIONS

Applications include bed grouting, duct grouting, non-shrink in-filling and jointing, pressure grouting for tunnels and shaft linings.

ADVANTAGES

- **POSITIVE EXPANSION** Ensures permanent contact and high bond to entire grouted surfaces.
- **EASY FLOW** plasticizing effect facilitates placement and injection.
- **HIGH COMPRESSIVE STRENGTH** Obtained with low water cement ratio.
- **IMPROVED QUALITY** Assists productions of grouts free from water pockets and bleeding.
- **MICROCELLULAR GROUT STRUCTURE** Combined with reduced water/cement ratio, provides improved resistance to both frost and fire damage.
- **IRON FREE** No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- **CHLORIDE** Composition allows high early strength development in grouts without the use of chlorides.

PROPERTIES

It's time for expansion is 0.15 min.-1.5hours. Temperature above 20c may slightly reduce the time.

Compatibility with cements: Can be used with all types of cement except high alumina.

Compressive Strength: plasticizing action of EXP.GROUT reduced the w/c ratio of cementitious grouts. This give increase in strength and long term durability when properly cured.

EXPANSION CHARACTERISTICS

Controlled positive expansion in unset grout incorporating FAST EXP. grout overcomes plastic settlement. An unrestrained Expansion of 1-4% is typical. Pressure to restrain plastic expansion Approx. 0.004 N/mm²

STANDARDS COMPLIANCE

FAST EXP GROUT is a suitable pre-stressing grout admixture when complying with BS8110 PART 1, 1985 section8, 9, 4, and 6.

TYPICAL COMPRESSIVE STRENGTH				
Mix	3 days	7 days	14 days	28 days
Neat Cement and FAST EXP. grout.	15.9 N/mm ²	27.9 N/mm ²	36.2 N/mm ²	42.1 N/mm ²
1: 1 Cement Sand and FAST EXP. grout.	19.3 N/mm ²	30.4 N/mm ²	39.2 N/mm ²	46.0 N/mm ²

SPECIFICATIONS

The following are typical grout mixes using FAST EXP. GROUT.

Mix 'A': NEAT CEMENT GROUT: Suitable for pressure injection of small voids of ducts where low viscosity grout is necessary.

Portland cement: 50 kg.
FAST EXP. grout: 225 gms.
Water: 20 to 22 liters
Yield: 36 liter

Mix 'B': CEMENT/SAND GROUT: Suitable for gravity or pumped injection filling of large voids where higher viscosity is acceptable.



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Portland cement: 50 kg.
Sharp Sand 5 mm-0(Surface dry): 50 kg.
FAST EXP. grout: 225 gms.
Water (inclusive of sand moisture content): 22 to 24 liters (inclusive of sand moisture content)
Yield: 57 liter
Where placing conditions allow, the water content can be reduced further to obtain a stiffer mix.

DIRECTION FOR USE

Note: For grout, mortar or concrete mixes with aggregate/cement ratio more than one use 4x225 grams units of FAST EXP. Grout/100 kg of cement.

MIXING

1. Place exact amount of specified water in a power operated grout mixer.
2. Whilst mixing continuously, slowly add the neat cement of 1:1 or 1:1:5 cement: sand mix to the water and at the same time, sprinkle in the FAST EXP. grout powder. Alternatively, premix the FAST EXP. grout with the dry cement or cement: sand before adding all to the water. Mix complete grout for a 3-5 MINUTES until through dispersion is achieved.
3. After mixing, all grout should be passed through a 5 mm. Sieve to remove lumps.
4. Where grout is pumped, the operation should be continuous to completion. Sufficient grout must be prepared to ensure that the container from which the grout is pumped is kept full, to prevent air from entering the line and causing void in the cavity being grouted.

MORTAR OR CONCRETE FILLING MIXES

1. Place water and sand plus aggregate. If used in a mixer While mixing

continuously, add the FAST EXP. grout slowly.

2. After mixing thoroughly, add the cement and continue mixing for 3-5 MINUTES.

PRECAUTIONS

Health and safety FAST EXP. GROUT is non-toxic. If eye contamination should occur wash immediately with plenty of water and medical advice should be sought.

PACKAGING

FAST EXP. grout is supplied in 10 kg & 20 Kg bags.

STORAGE

FAST EXP. grout has a minimum shelf life of 12 months when stored in a dry place in unopened packages.

WARRANTY

This product is warranted to be free of defects in material and workmanship, and conform to FastChem Construction Chemicals ("FastChem") quality control standards. All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind, expressed or implied including but not limited to, an implied warranty of merchantability or an implied warranty of fitness for a particular purpose. Satisfactory results depend upon many factors beyond FastChem's control. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from his or her direct use, indirect use or consequential to their use of the product. FastChem shall not be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. FastChem's sole responsibility shall be to replace that portion of the product which proves to be defective. Any warranty claim must be made within six (6) months from the date of the claimed breach. This limited warranty applies only if the product was properly installed and used according to all instructions and was properly stored prior to use.

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