



6.06 XPERT EXPANDING GROUT

Plasticized Expanding Grout Admixture

PRODUCT DESCRIPTION

XPERT Expand Grout is an admixture for cementitious grouts where reduced water/cement ratio and positive expansion is required. The Expanding 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.
- 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 - 1.5 hours. 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 XPERT Expand Grout reduced the w/c ratio of cementitious grouts. This gives increase in strength and long-term durability when properly cured

EXPANSION CHARACTERISTICS

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

STANDARDS COMPLIANCE

XPERT Expand Grout is a suitable pre-stressing grout admixture when complying with BS 8110 PART 1, 1985 section 8, 9, 4, and 6.

TYPICAL COMPRESSIVE STRENGTH				
Mix	3 days	7 days	14 days	28 days
Neat Cement & XPERT 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 & XPERT 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 XPERT Expand Grout.

Mix 'A' Neat Cement Grout: Suitable for pressure injection of small voids of ducts where low viscosity grout is necessary.

CATEGORY	PARAMETERS
Portland cement	50 kg
XPERT Exp. Grout	225 gms
Water	20 to 22 liters
Yield	36 liters

Mix 'B' Cement / Sand Grout: Suitable for gravity or pumped injection filling of large voids where higher viscosity is acceptable.

CATEGORY	PARAMETERS
Portland cement	50 kg
Sharp Sand 5 mm 0 (Surface dry)	50 kg
XPERT Exp. Grout	225 gms
Water (inclusive of sand moisture content)	22 to 24 liters
Yield	57 liters

DIRECTION FOR USE

For grout, mortar or concrete mixes with aggregate / cement ratio more than one use 4x225 grams units of XPERT Expand 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 XPERT Expand Grout powder. Alternatively, premix the XPERT Expand 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 XPERT Expand Grout slowly.
2. After mixing thoroughly, add the cement and continue mixing for 3-5 minutes.

PRECAUTIONS

Health and safety XPERT Expand Grout is non-toxic. If eye contamination should occur wash immediately with plenty of water and medical advice should be sought.

PACKAGING

XPERT Expand Grout is supplied in 10 kg & 20 Kg bags.

STORAGE

XPERT Expand Grout has a minimum shelf life of 12 months when stored in a dry place in unopened packages.