

Techno Flow M

Plasticized expanding grout admixture

Uses

As an admixture for cementations grouts where a low water/cement ratio and positive expansion are required. Application includes bed grouting, duct grouting, non-shrink infilling and jointing. Specially formulated for grouting precast cables ducts

Advantages

Shrinkage compensation Gaseous expansion system compensates for plastic shrinkage and settlement in cementations grouts.

Durability: Reduced water/cement ratio ensures low permeability and long-term performance in service.

Flow ability: Gives high grout fluidity with low water/cement ratio, for ease of placement or injection.

Iron-free: No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.

Chloride-free: Composition allows high early strength development in grouts, without the use of chlorides.

Specially formulated for grouting precast cables ducts.

Description

Techno Flow M is supplied as a powder admixture for cementations grouts and concrete. The material is a combination of a plasticizing agent and a gas producing expansion medium. The plasticizing agent allows the use of a low water/cement ratio with consequent high strengths and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion. Sufficient restrained expansion is developed to ensure a high degree of interfacial contact. If a prepacked cement based grout is required instead of an admixture, use Techno Flow range, which only requires the addition of water.

Specification clauses

Performance specification

All grouting (specify details and areas of application) must be carried out with a cement-based grout incorporating a plasticized, expanding powder admixture. The admixture must be iron-free and chloride-free and shall be added to the grout in the proportions 227 gm of admixture per 50 Kg of cement. The admixture shall provide an expansion of 1 - 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and placed strictly in accordance with the manufacturer's instructions.

Properties

Chloride content Nil

Setting times

Techno Flow M does not significantly affect the setting times of cement-based grouts.

Expansion characteristics

The controlled positive expansion in unset grouts Incorporating Techno

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Flow M overcomes plastic settlement when measured in accordance with ASTM C827.

An unrestrained expansion of 1-4% is typical.

Time of expansion

15mins to 4 hours. Temperatures above 20 °C may slightly reduce these times.

Pressure to restrain plastic expansion

Approximately 0.004 N/mm².

Compatibility

Techno Flow M is compatible with all types of Portland cement but is incompatible with High Alumina Cement. Techno Flow M may be used in mixes containing certain Other admixtures M. T. C. technical department should be consulted in these situations.

Instructions for use

Dosage

Typical mixes

OPC (KG)	5 mm sand.	Water (Liters)	Cebex 220M	Approx yield (Liters)
50		20-22	1 Pack	36
50	50kg	20-24	1 Pack	57

Note

For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1 use 450 gm Techno Flow M per 50 Kg of cement.

Overdosing

Drastic overdosing of Techno Flow M increases expansion and may cause frothing.

Mixing

For best results a mechanically powered grout mixer must be used. For quantities up to 50 Kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer.

It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity. The selected water content should be accurately measured into the mixer. Slowly add the cement (and sand if required) and Techno Flow M. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

Application

Areas to be grouted should be prepared in the usual way to ensure, clean sound, pre-wetted substrates. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

Curing

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On completion of the grouting operation, exposed areas which are not to be cut back should be thoroughly cured by means of water application. Techno Cure curing membrane or wet Hessian.

Cleaning

Grouts mixed with Techno Flow M should be removed from tools and equipment immediately after use with clean water. Remove cured material mechanically

Precautions

Health and safety

When mixing grouts with Techno Flow M, gloves should be worn. Splashes of grout to the skin or eyes should be washed off with clean water. In the case of prolonged irritation, seek medical advice.

Fire

Techno Flow M is non-flammable.

Storage

Techno Flow M has a shelf life of 12 months if kept in a dry store in its original packaging. High temperature and humidity storage may reduce this.

Packaging

Techno Flow M is supplied in 225 gm to 227 gm units. Other forms of packaging may be available for special orders.

Supply

Contact your local M. T. C. office or representative.

Technical service

The company provides a technical advisory service supported by a team of specialists in the field.

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