



SILKON
ADDITIVES INDIA PVT LTD

Lapkon 228

Plasticised expanding grout admixture

Lapkon 228 is an admixture for cementitious grouts where a reduced water/cement ratio and positive expansions are required. Applications include bed grouting, duct grouting, non-shrink infilling, post tensioning in various structure and jointing.

Product usages and advantages

- Gaseous expansion system compensates for plastic shrinkage and settlement in properly designed cementitious grout.
- Reduced water/cement ratio mixes in the grout mix ensures low permeability and long term durability in service.
- Gives grout high fluidity with low water/cement ratio, thus making placement or injection of the grout easy.
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- Composition allows high early strength development in grouts, without the use of chlorides.

Standards compliance

Lapkon 228 is a suitable pressure grouting admixture complying with BS: 8110 Part 1-1985, Section 8.9.4.6.

Description

Lapkon 228, a plasticised expanding grout admixture is supplied as a powder. The material is a combination of a plasticising agent and a gas producing expansion medium. The plasticizing agent allows the use of a reduced water/cement ratio with consequent increased strength and durability. The expansive medium resists the natural settlement and plastic shrinkage of the grout and aids stability and cohesion.

Technical support

Silkon offers a comprehensive range of high performance, high quality concrete repair and construction products. In addition, Silkon offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country.

Properties

- Chloride content : Nil as per BS:5075
Compressive strength: The plasticising action of Lapkon 228 allows reduction of the water cement ratios of cementitious grouts whilst maintaining flow properties. This gives improvement in strength and long term durability when cured under restraint.
- Setting Times : Lapkon 228 does not significantly alter the setting times of cement based grouts.
- Expansion : The controlled positive expansion in Characteristics unset grouts incorporating Cebex 100 overcomes plastic settlement when measured in accordance with ASTM C827. An unrestrained expansion of up to 4% is typical.
- Time for expansion : 15 minutes - 2 hours. Temperatures above 25°C may slightly reduce these times.
- Compatibility : Lapkon 228 is compatible with all types of portland cement. Lapkon may be used in mixes containing certain other Silkon admixtures. Silkon shall be contacted for further information.



SILKON
ADDITIVES INDIA PVT LTD

Lapkon 228

Specification clauses

Performance specification

All grouting (specify details and areas of application) must be carried out with a cement based grout incorporating a plasticised, expanding powder admixture. The grout admixture must be iron-free and chloride-free and shall be added to the cement grout in the proportion of 228g per 50kg of cement. The grout admixture shall provide an expansion of upto 4% in the fresh grout, by means of a gaseous system. The grout admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

Supplier specification

All grouting (specify details and areas of application) must be carried out using a cement based grout, incorporating Lapkon 228 manufactured by Silkon and applied strictly in accordance with the manufacturer's technical datasheet.

Application instructions

Mixing

For best results a mechanically powered grout mixer must be used. For quantities upto 50kg, a slow speed drill fitted with a high shear paddle is suitable. Large quantities will require a high volume drum 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. The cement (and sand if required) shall be slowly added to Lapkon 228. Mixing shall be continued for 5 minutes, making sure that a smooth even consistency is obtained.

Application

It shall be ensured that areas to be grouted are clean,

sound, and then prewetted. The unrestrained surface area of the grout must be kept to a minimum. The grout shall be placed within 20 minutes of mixing to gain the full benefit of the expansion process. Usual placing or pumping methods shall be adopted ensuring a continuous operation.

Curing

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

Limitations

Lapkon 228 is incompatible with High Alumina Cement.

Estimating

Packaging

Lapkon 228 is supplied in 228 g and 25 kg packs.

Dosages

OPC	Concreting Sand	Water	Lapkon 228	Approx. Yield
50kg	-	20-22 litres	228 g	36 litres
50kg	50 kg	22-24 litres	228 g	57 litres

Note : For grout, mortar or concrete mixes with an aggregate/ cement ratio more than 1, 4 x 228 g units of Lapkon 228 per 100 kg of cement, shall be used.

Effects of overdosing

Drastic overdosing of Lapkon 228 increases expansion and may cause frothing.

Storage

Shelflife

Lapkon 228 has a shelf life of 6 months if kept in a dry store in its original packing. High temperature and humidity



SILKON
ADDITIVES INDIA PVT LTD

Lapkon 228

Precautions

Health and Safety instructions

Lapkon 228 is of low hazard.

Contact with the skin and eyes, or inhalation of dust should be avoided. Suitable protective clothing, gloves eye/face protection and dust mask should be worn. In case of contact with skin, it shall be washed with clean water. In case of contact with eyes, it shall be rinsed immediately with plenty of water and medical attention shall be sought immediately.