



SILKON
ADDITIVES INDIA PVT LTD

Lapkon HSG

Lapkon HSG is a high strength, epoxy resin grout which Provides a free flowing grout, for use where physical properties and chemical resistance of the hardened grout are of utmost importance. It is suitable for a wide range of heavy duty applications

Product features and advantages

- Under plate grouting to substantial structural elements.
- Base plate grouting in dynamic load situations such as turbines and other reciprocating machinery.
- Heavy industrial applications in steelworks, refineries chemical plants and electroplating works.
- Structural in fill where very high strength is required.
- Rail track applications, to support heavy cranes, or on transporter rails.
- Excellent durability - high compressive, flexural and tensile strengths ensure a long working life.
- Cost effective - high early strength gain promotes minimum down time and early commissioning of plant.
- User friendly - simple, full pack mixing to ensure that the performance characteristics are achieved.
- Versatile - suitable for a wide range of loading situations including repetitive dynamic loads.
- Excellent in service performance - non-shrink capability ensures full surface to surface contact.

Lapkon HSG a solvent free epoxy resin grout designed for grouting of gap widths of 10 to 75 mm. It is supplied as a three component system consisting of base, hardener and specially graded aggregate. The components are supplied in the correct mix proportions designed for whole pack mixing on site.

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.

Technical Properties:

Pot life	: 2 hours @ 23°C
Tensile strength @ 27°C BS6319 Part 7	: 14 N/mm ² at 7 days
Flexural strength @ 27°C BS6319 Part 3	: 26 N/mm ² at 7 days
Mixed Density @ 27°C	: 1.95 to 2.05 g/cc
Compressive strength @ 27°C ASTM C579	: 75 N/mm ² at 1 day 92 N/mm ² at 3 days 100 N/mm ² at 7 days
Maximum flow distance for a head of 100 mm at 20°C :	
	35 mm gap - 2000 mm 70 mm gap - 3500 mm
Coefficient of thermal expansion ASTM C531	: 28.1 x 10 ⁻⁶

Application Methodology:

Preparation

The unrestrained surface area of the grout must be kept to a minimum. Generally, the gap between the perimeter formwork and the plate edge should not exceed 75 mm on the pouring side and 25 mm on the opposite side. Formwork on the flank sides should be kept tight to the plate edge. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Shuttering

The formwork should be constructed to be leak proof as Lapkon HSG is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints.

For free flow grout conditions, it is essential to provide a hydrostatic head of grout. To achieve this a feeding hopper should be used - please consult your local Silkon office for more details



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Mixing:

The entire contents of the hardener can should be poured into the base container and mixed until homogeneous. Place the mixed base and hardener into a suitable forced action spiral paddle mixer making sure that the entire volume is poured in. Add the aggregate and mix for 2-3 minutes or until uniform colour is achieved. Once mixed, the material must be used within the specified pot life (see under Properties). After this time, unused material will have stiffened and should be discarded.

Note: Immediately prior to placement, all surfaces must be dry.

Placing

Ensure that the grout can be placed within its pot life. Continuous grout flow is essential. Sufficient grout must be available prior to starting and the time taken to pour a batch must be regulated to the time taken to prepare the next one. Pouring should be from one side of the void to eliminate air entrapment. The hydrostatic head must be maintained at all times so that a continuous grout front is achieved.

Hot weather working

Whilst the performance of Lapkon HSG at elevated temperatures is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures above 35°C, the following guidelines are used:

- I. Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- II. Keep mixing and placing equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- III. Try to eliminate application in the middle of the day, and certainly avoid application in direct sunlight.
- IV. Ensure that there are sufficient operatives available to complete application within the material's pot life.

Application precautions

Grouts should not be placed in any unrestrained situation, i.e. base plate plinths, etc. Failure to comply may lead to crack development in the grout. Lapkon HSG is recommended for grouting in a maximum area of the 3 sqm at maximum thickness of 75mm. Due to thermal and Mechanical stress, Sometimes grouts lead to crack.

Package:

Lapkon HSG : 14 litre packs

Storage:

When stored in warehouse conditions below 35°C, Lapkon HSG will have a shelf life of 12 months.

Health and safety

Some people are sensitive to epoxy resin so gloves and a barrier cream or similar should be used when handling these products. If contact with the resin occurs, it must be removed before it hardens with a resin removing cream. Follow by washing with soap and water. **Do not** use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of clean water and seek medical treatment immediately.