

Flo-Grout EPCG

High strength pourable epoxy foundation resin grout



Description

Flo-Grout EPCG is a high strength, non-shrink, pourable epoxy resin grout suitable for grouting gaps with thicknesses up to 300 mm.

Flo-Grout EPCG is a three component system having base and hardener as the resin part with the blended ready filler part. And based on actual installation conditions, adjusting the quantity of the filler part can be done with maintaining the needed properties.

Applications

Flo-Grout EPCG is ideally designed for use in the following applications:

- ▲ Machine base plates.
- ▲ Heavy crane rails.
- ▲ Pile top waterproofing.
- ▲ Bearing plinths.
- ▲ High speed turbines.
- ▲ Grouting areas where occasional chemical spillage may occur.

Advantages

- ▲ Resistant to dynamic loading.
- ▲ Non-shrink and low creep characteristics under continuous loading.
- ▲ Exceptionally high compressive, flexural and tensile strengths.
- ▲ Extremely dense with crack resistance.
- ▲ Exceptional bond to concrete and steel surfaces.
- ▲ Good chemical resistance.
- ▲ High early strength development allowing for rapid installation.

Technical Properties @ 25°C:

Mixed density:	2.1 ± 0.1 g/cm ³
Compressive strength*: ASTM C579-82, Method B	≥ 85 MPa @ 7 days
Flexural strength*: ASTM C580-74 Fill #1	≥ 30 MPa @ 7 days
Tensile strength*: ASTM C307-83 Fill #1	≥ 9 MPa @ 7 days ≥ 12 MPa @ 14 days
Shrinkage*: ASTM C531	≤ 350 microstrain
Modulus of elasticity*: ASTM C580-74	≥ 15 GPa @ 20°C ≥ 13 GPa @ 40°C
Co-efficient of thermal expansion*: ASTM C531-81	25 x 10 ⁻⁶ /°C
Water absorption*: ASTM C413	≤ 0.1%
Crack formation (Fill #1): @ 300 mm thickness & 35°C	No cracks or bleeding
Working life:	40 - 70 min @ 25°C 25 - 45 min @ 35°C
Recommended working temperature:	15 - 35°C
VOC: ASTM D2369	≤ 10 g/ltr (complies with LEED)

**For all fill options.*



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Resin Filler Ratio

As the foundation situation will vary for each installation project, the quantity of the filler part can be adjusted to obtain the proper flow and the continuous fill as required.

The following table indicates the three different situations in relation to the resin:filler ratio.

(Note 1: It is always preferable to use the maximum amount of filler part that will give the proper installation, and the highest results in strength).

(Note 2: At temperatures $\leq 25^{\circ}\text{C}$, the flow properties will be reduced. So reducing the filler part will help in adjusting it.

Temperature @25°C			
	High fill of filler for thick pours Fill #1	Moderate fill of filler for medium pours Fill #2	Low fill of filler for thin pours Fill #3
Mixing ratio:	Base: 10.9 kg Hardener: 4.8 kg Filler: 4 x 22.7 kg	Base: 10.9 kg Hardener: 4.8 kg Filler: 3.5 x 22.7 kg	Base: 10.9 kg Hardener: 4.8 kg Filler: 3 x 22.7 kg
Flow using flow cone with 200 ml volume: BS 890	15 - 16 cm	16 - 17 cm	18 - 19cm
Bulk density of the filler:	1.8 g/cm ³		

It is important NOT to remove more than 1 filler bag.

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Method of Use

Substrate Preparation

The Substrate should be sound, clean and free from contamination. Surface laitance should be removed by scabbling or grit blasting.

Steel surfaces should be grit blasted to remove all rust and scale.

Concrete surfaces should be dry.

Holes drilled for anchor bolts should be thoroughly cleaned from dust and loose debris using suitable brush or compressed air.

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

The entire content of the Hardener pack should be added to the Base pack. Care should be taken to ensure that the bottom and the product sides are thoroughly scraped and used. Mix the two components for 2 minutes. The filler should be gradually added while mixing.

Mixing should continue for 3 minutes or until a uniform consistency obtained.

Placing and Finishing

Under Base plate:

Enough materials should be available to achieve continuous fill and to complete the work. Pouring of the mixed grout should be started from one side only to avoid air entrapment.

To obtain maximum flow distance, a side shutter feed 100 mm height should be erected and used to build the required head.

Formwork:

As the mixed grout possesses fluid characteristics, all formwork and shutters should be water tight. This can be achieved by sealing underneath the formwork and at the joints by using an appropriate mastic.

Notes:

- ▲ If application is done under high temperatures, care should be done because the working time will be reduced significantly.
- ▲ To reduce the effect of this problem, try to store the unmixed materials in a cool environment, avoiding the direct sunlight. Also, try not to make the application in the middle of the day or direct sunlight.

Cleaning

All tools should be cleaned immediately after finishing using a suitable epoxy thinner. Hardened materials should be cleaned mechanically.

Packaging

The full unit of Flo-Grout EPCG is with 106.5 kg consisting of Base, Hardener and 4 filler bags.

Thicknesses and Size Limitations

Flo-Grout EPCG can be applied in a single layer at thicknesses between 10 - 300 mm. For thicknesses greater than 300 mm:

- ▲ Multiple layers can be applied after initial curing of the previous layer.

Yield

Approximately 50.5 litre for the full unit.

Storage

Flo-Grout EPCG has a shelf life of 12 months from date of manufacture if stored at temperatures between 5°C and 35°C.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

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Cautions

Health and Safety

Flo-Grout EPCG is irritant to the eyes, skin and respiratory system. Wear suitable gloves and eye protection.

For further information refer to the Material Safety Data Sheet.

Fire

Flo-Grout EPCG is nonflammable.

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Note:

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