EmO Grout EP 100

High strength, Low exothermic, Epoxy resin free flow grout

Uses

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 including:

- Under plate grouting to substantial structure elements
- Base plate grouting in dynamic load situations such as turbines and other reciprocating machinery.
- Heavy industrial applications in steel works, refineries, chemical plants and electroplating works.
- Structural infill where very high strength is required.
- Rail track applications, to support heavy cranes, or on transporter rails.

Advantages

- Excellent durability – high compressive, flexural and tensile strengths ensure a long working life.
- Cost effective – high early strength gain promotes minimum downtime 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.

Description

Emo Grout EP 100 is a solvent free, low exotherm epoxy resin grout designed for grouting of gap widths of 10 to 100 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.

Specification

Where shown on the contract documents, the epoxy resin, free flow grout shall be EmO Grout EP 100 by ELMRR. The cured material shall exhibit a minimum compressive strength of at least 90N/mm^2 in 3 days and a compressive creep of 2.85N/mm^2 in accordance with ASTM C 1181

Typical Properties

Pot life	:	30 Min @ 23^{0}c
Compressive strength	:	90N/mm^2 at 1 day
Flexural strength	:	26N/mm^2 at 7 days
Tensile Strength	:	14N/mm^2 at 7 days

Maximum flow distance for a head of 100 mm at 20^{0}c:

35 mm gap	:	2000 mm
70 mm gap	:	3500 mm

Coefficient of thermal expansion

ASTM C 531 : 28.1×10^{-6}

Compressive creep

(ASTM C 1181-2.85N/mm^2

1 year, 60^0c) : 2.05×10^{-3} mm/mm

Technical Support

ELMRR provides a comprehensive technical support service to specifiers, end users and contractors and is able to offer on-site technical assistance.

Instructions for Use

Preparation

Underplate grouting

The unrestrained surface area of the grout must be kept to a minimum. Generally the gap between the perimeter form work and the plate edge should not exceed 100mm on the pouring side and 25mm on the opposite side. Form work 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.

Formwork

The form work should be constructed to be leak proof as EmO Grout EP 100 is a free flow grout. This can be achieved by using form 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.

Foundation surface

This must be free from oil, grease, or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

Base plate

If delay is likely before placing steel base plates, it is recommended that the underside and edge are coated with EmO Seal EP to prevent rust formationand ensure bonding with the EmO Grout EP 100. All metal surfaces should be cleaned to a bright finish.

Mixing

The entire contents of the hardener should be poured in to the base container and mixed until homogeneous. Place the mixed base and the hardner in to a forced action mixer making sure that the entire volume is poured in. add the aggregate and mix for 2 – 3 minutes or until uniform color is achieved.

Placing

Place the grout with in the pot life of the material. After this time, unused material will have stiffened and should be discarded.
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.

High temperature working

Whilst the performance of EmO Grout EP 100 at elevated temperature is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures above 35^0c, the following guidelines are used:

1. store unmixed materials in a cool environment, avoiding exposure to direct sunlight.
2. 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 in to contact with the material itself.
3. try to eliminate application in the middle of the day, and certainly avoid application in direct sunlight.
4. ensure that there are sufficient operatives available to complete application with in the material's pot life

Limitations

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.

Estimating

Supply

EmO Grout EP 100 : 14 ltr pack

EmO Seal EP : 5 ltr

Equipment care

Clean all equipment promptly using **ELMRR Solvent No.1**. Cured material will have to be mechanically removed.

Health & Safety

Precautions

EmO Grout EP 100 should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

Additional information

ELMRR manufactures a wide range of products specifically designed for the repair and refurbishment of damaged reinforced concrete. This includes hand-placed and spray grade repair mortars, fluid micro-concretes, chemical resistant epoxy mortars and a comprehensive package of protective coatings. In addition, a wide range of complementary products is available. This includes joint sealants, waterproofing membranes, High quality precision grouts, anchoring and specialised flooring materials.

Product Manufactured By:

Elmrr Chemicals
(New Rusayl Heights)

FACTORY & H.O
P.O.BOX 176, PC 124,
Rusayl Industrial Area,
Sultanate of Oman
Tel: +968 24446914
Fax: +968 24446776

Email: sales@elmrr.com

www.elmrr.com