

CIKOgrout EP

High flow, high strength Epoxy resin-based grout



Description

CIKOgrout EP is a three-component epoxy resin based high strength grout for filling gaps between similar or dissimilar substrates subjected to dynamic and static loads. CIKOgrout EP is suitable for grouting anchor bolts, base plates, bridge bearings, pile top repair, crane rails, etc..

CIKOgrout EP is a solvent free epoxy resin-based grout consisting of base, hardener and graded fillers with special additives resulting in a free high flow, high strength grout suitable for application thicknesses ranging between 10 and 100 mm at application ambient temperatures ranging between 5°C and 35°C.

Properties & Advantages

- Three components product.
- High early and final strength allowing for fast and rapid further construction scopes.
- Resistant to wide range of chemicals, acids, hydroxides, alcohols, solvents, carbonates, etc.
- Withstands static and dynamic loads result of high modulus of elasticity by compression.
- Very low to NIL permeability.
- Exhibits high compressive, flexural and tensile strengths.
- High flowability, pumpable and suitable for grouting confined spaces and gaps.
- Low VOC
- Low creep
- High EBA (Effective Bearing Area)

Application Area & Uses

CIKOgrout EP can be used for grouting of,

- Heavy machinery base plates.
- Anchors.
- Turbine base plates.
- Bridge bearing and pile heads
- Pumps and compressor base plates
- Pre-cast concrete parts
- Steel columns base plates
- Heavy crane rails

Physical properties

Form	3 component system Part-A & B: Liquids Part-C: Powder
Colour	Standard grey
Mixed Density	2.00 ± 0.05 Kg/L
Pot life	30-40 minutes @ 25°C 15-20 minutes @ 35°C
Maximum aggregate size	1mm
Initial Flowability ASTM C1437	≥150%
Compressive Strength ASTM C 579	≥75 N/mm ² @ 1 day ≥95 N/mm ² @ 7 days ≥105 N/mm ² @ 28 days
Flexural Strength ASTM C580	≥30 N/mm ² @ 7 days ≥35 N/mm ² @ 28 days
Tensile Strength ASTM D638	≥12 N/mm ² @ 7 days
Modulus of Elasticity ASTM C469	≥30*10 ³ N/mm ² @ 7 days
Slant Shear Bond Strength ASTM C882	≥14 N/mm ² @ 7 days (Concrete Failure)
Water Permeability BS EN 12390-8	NIL (0 mm)
Chemical Resistance ASTM D543	Resistant to most chemicals for 7 days testing duration. Specific Data are available upon request.

Coverage / Yield

A 25 kg Kit of CIKOgrout EP properly mixed yields 12.5 litres of fresh grout.

Application instructions

Surface preparation of concrete

Ensure that the concrete surface is free of loose and unsound material. Clean and treat the surface by mechanical means such as diamond disk grinding, grit blasting or chipping to attain a sound, and rough concrete surface followed by compressed air or any suitable dust removal means to attain a dust free surface. Grease and oil traces if present shall be removed. The surface must be clean and dry, free from free standing water and dampness having a moisture surface content not exceeding 4%.

Bolt pockets must be cleaned and made free from free standing water and dampness.

Surface preparation of Steel

Steel surfaces to be in contact with CIKOgrout EP shall be free of rust, coatings or any type of contaminations that might impede the adhesion. Grit or sand blast the surface to totally remove rust and coating.

Formwork

Watertight formwork must be made around grouting area to the required height. It is recommended to restrict the width of shoulders around base plate to a maximum of 50mm from the face of the base plate. One of gun grades CIKOjoint wide range of sealants products can be used to seal the gap between formwork and concrete face to make the formwork watertight at least 12 to 24 hours prior to grouting.

Mixing

The base [Part-A] should be mixed thoroughly using a heavy-duty adjustable speed drill-paddle assembly for 1 minute to achieve a homogenous colour mixture. Whilst the drill mixer is in running mode, dispense the hardener component [Part-B] of CIKOgrout EP and further mix for an additional 1 minute. The third component [Part-C] should be dispensed gradually into the mix and mixing should be continued for at least 2 to 3 minutes until a homogenous mix and colour is obtained ensuring that all [Part-C] is wetted with the resin. It is recommended to have minimum two mixing units for continuous grout pouring into the application area as mixing more than 1 kit at once is not recommended. The number of mixing units depends on size and volume of grouting.

Placing

Pour the properly mixed grout from one side or corner of the base plate to avoid air voids. Maintain a minimum of 15 cm pouring head to achieve maximum flow property of the grout. The mixed material must be placed before the end of its pot life and working time to benefit from its initial flow properties.

For machinery installations, anchor bolt pockets can be grouted prior to base plate grouting.

Precautions and Recommendations

- The ambient temperature during application must be between 5°C and 35°C and single pour application thickness shall not exceed 100mm.
- Do not allow the grout to extend above the metal base plate in form of a shoulder, it is recommended to be either square or splayed especially in bridge bearing grouting.
- For higher grouting thicknesses, conduct two pouring applications with a time gap of 18 hours up to 24 hours. Alternatively use CIKOgrout EP200. Refer to its technical data sheet or/and consult CIKO technical department for further support and advice.

Packaging

CIKOgrout EP is available in 25kg kits consisting of Part-A, B & C.

Storage

CIKOgrout EP should be stored under cool enclosed shaded areas at temperatures between 5 – 35°C.

Shelf life

CIKOgrout EP has a shelf life of 12 months if stored in accordance with manufacturer instructions.

Health & safety

CIKOgrout EP should not come in contact with eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Applicator should wear appropriate clothes, gloves and goggles. Use of barrier cream is recommended to provide additional skin protection. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice.

Refer Material Safety Data Sheet for further details.

Technical Support

For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off-site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp-proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries

Legal Notice and Warranty

CIKO warrants this product to be free from manufacturing defects and to meet the technical properties stated in the current Technical Data Sheet, if used as directed within its shelf life. Satisfactory results depend not only on quality of product but also on many factors beyond our control. CIKO makes no other warranty or guarantee, express or implied, including warranties of merchantability or fitness for a particular purpose with respect to its product. The sole and exclusive remedy of purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of CIKO. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by purchaser. CIKO will not be responsible for any special incidental, consequential including lost profits or punitive damages of any kind. Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on CIKO's present knowledge and experience. However, CIKO assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. CIKO reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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All CIKO products are manufactured under a strict management system conforming to and in compliance with requirements of international standards of Quality, Environmental, occupational Health and Safety ISO 9001, ISO14001 and ISO45001.



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