

CIKOpoxy FL100

Solvent free high-performance epoxy resin floor coating



Description

CIKOpoxy FL100 is a solvent free two components epoxy-based floor coating system recommended for protection of concrete and other suitable substrates.

CIKOpoxy FL100 is based on high quality pigmented liquid epoxy resin cured with a special grade of hardener that requires proper mixing on site for usage.

The cured coating offers a seamless floor topping with total thickness ranging from 0.4 to 1 mm applied in several coats resulting in a smooth or textured seamless hygienic floor finish.

Advantages & Properties

- Two component epoxy-based product easy to mix and apply.
- Good resistance to spillages of most chemicals, hydrocarbons, and solvents.
- Exhibits good wear and abrasion resistance.
- Hygienic with high resistance to fungal growth
- Easy to clean and maintain
- Provides durable floor
- Available in a wide range of light reflective colours to provide a brighter work area
- Low VOC, less than 20 g/L

Application Area & Uses

CIKOpoxy FL100 is a suitable floor coating for industrial, commercial, and residential segments such as,

- Warehouse, stores, offices, production, and operation areas
- Utility services rooms in commercial buildings
- Car parks, driveways, walkways, ramps
- Light engineering workshops

Physical properties

Form	liquid two components system
Colour	Available in wide range of colours including RAL codes
Solids	99-100%
Mixing ratio	Pre-weighted, partial mixing is not recommended
Pot life	45 to 60 mins @ 25°C 30 to 40 mins @ 35°C
Mixed Density	1.35 ± 0.02 Kg/L
Recommended over coating time	12 hours (minimum) 36 hours (maximum)
Surface dry	10 to 12 hours
Final cure	7 days
Allowable foot traffic	Approx. 24 hours
Compressive Strength ASTM D695-10/ ASTM C579/ BS 6319	≥80 N/mm ² @ 7 days ≥85 N/mm ² @ 14 days
Tensile Strength ASTM D638	≥15 N/mm ² @ 7 days
Flexural Strength ASTM C580	≥40 N/mm ² @ 7 days
Pull off Adhesion Strength ASTM D 7234	≥1.5 N/mm ² (Concrete failure)
Tear Resistance ASTM D1004/ISO 34-B	≥70 N/mm @ 7 days
Slip Resistance BS EN 14231	≥75 PTV (smooth) ≥90 PTV (with CIKO ASG)
Abrasion Resistance ASTM D4060 (CS10,1 kg,1000 cycles)	17-22 mg
Surface Spread of flame BS474-7	Class 1
Shore Hardness ASTM D2240	(A) 93 ± 2 @ 7 days (D) 82 ± 3 @ 7 days

Chemical Resistance

CIKOpoxyl FL100 is resistant to a wide range of chemicals when tested as per ASTM D543, Patching Method. Specific data is as below table:

Test Solution	Test Conditions	Observation & Test Result
Sulphuric acid	23± 2°C (7 days)	No Characteristic Observed (Resistant)
Hydrochloric Acid		
Acetic Acid		
Lactic Acid		
Sodium Hydroxide		
Ammonium Hydroxide		
Sodium Chloride		
Petrol		
Kerosene		
Hydraulic oil		
Vegetable oil		

Coverage

15 L kit of CIKOpoxyl FL100 will provide a theoretical coverage between 73 and 75 m² at 200 microns DFT. Note: Coverage rates given are theoretical. Due to wastage and the variety or/and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions.

Application instructions

Surface preparation of concrete and screeds

The concrete and screed shall be fully cured aged at least 28 days achieving a compressive strength and surface pull off tensile strength of 25 N/mm² and 1.5 N/mm² respectively. The concrete surface should be free from dust and loose particles or weak thin layers. All contamination such as oil, grease and extraneous spillages must be cleaned using the suitable cleaning agent. Concrete shall be diamond disk grinded, grit/shot blasted or treated with equivalent and suitable mechanical means having a surface moisture content not exceeding 4%.

All cracks, deteriorated areas, movement joints shall be well treated and addressed using the appropriate epoxy-based repair and injection materials from CIKO wide range of products prior to the application of the primer or first coat of CIKOpoxyl FL100.

Priming

Usually priming is not required, unless CIKOpoxyl FL100 is to be applied over bare concrete or on highly porous substrates.

For porous surfaces, use a low viscosity two components epoxy-based primer such as CIKOpoxyl Prim 11 or CIKOpoxyl Prim 14 to prime the substrate. The base [Part-A] and hardener [Part-B] components of the primer should be mixed thoroughly using a heavy duty, adjustable speed drill paddle assembly for three

to four minutes and ensure a homogenous mixture is obtained.

For concrete surfaces that are of medium to low porosity and subject to heavy traffic, it is recommended to use CIKOpoxyl Prim14 or CIKOpoxyl Prim 14- SF.

To improve mechanical bonding and achieve an anti-slip textured surface, broadcast CIKO ASG over the still wet primer.

Application instructions of primer should be carried out as per the respective technical data sheet. Allow the primer to dry for 12-24 hours depending on the prevailing ambient conditions prior proceeding with application of CIKOpoxyl FL100 further coats.

Application of topcoats

The base component [Part-A] of CIKOpoxyl FL100 should be mixed thoroughly using a heavy-duty adjustable speed drill-paddle assembly for one minute separately to ensure a homogenous mix with uniform colour. whilst mixing, pour the hardener component [Part-B] into the mixed base component [Part-A] and further mix for 2 to 3 minutes to achieve a homogeneous mixture.

Properly mixed material should be applied using brush or high-quality epoxy roller over the dry and clean primed surface at the required consumption rate to maintain the required thickness. The coated surface should be left for 12 – 24 hours curing, depending on the prevailing ambient conditions.

It is always recommended to apply CIKOpoxyl FL100 in two coats or as a single coat of higher thickness. The high-build coat should be spiked using spike rollers to release entrapped air in the material to obtain a uniform, smooth and even finish.

Precautions

Prior and during application of primer and coatings, ensure that:

- Moisture content of the substrate is less than 4%.
- Ambient temperature is between 10 – 45°C.
- Substrate temperature is between 10 – 35°C, and at least 3°C above dew point temperature.
- Relative humidity is below 75%.
- Rain, water spillage or water condensate is not expected within the next minimum 18 hours.

Recommendations

- When CIKOpoxyl FL100 is applied in areas exposed to direct sunlight and UV rays, it is recommended to apply a final UV stable and resistant coating such as CIKOcoat UV333.
- The total thickness of the applied epoxy coating is relatively dependant on application area, service requirements and conditions in addition to specifications. Consult CIKO technical department for further support and assistance.

Packaging

CIKOpoxyl FL100 is available in 15 L kits consisting of Part A & B.

CIKOpoxyl Prim 11 and CIKOpoxyl Prim 14 are available in 4 and 15 L kits consisting of Part A & B.

CIKOpoxyl Prim 14-SF is available in 20 kg and 26 Kg packs consisting of Part A & B.

Storage

CIKOpoxyl FL100 should be stored under cool enclosed shaded area away from rain, moisture, and direct sunlight at temperatures between 5°C and 35°C.

Shelf life

CIKOpoxyl FL100 has a shelf life of 12 months if stored in accordance with CIKO's storage instructions.

Health & safety

CIKOpoxyl FL100 should not contact eyes, skin or swallowed. Ensure adequate ventilation and avoid inhalation of vapours.

Applicator should wear suitable clothes, gloves, masks, and goggles. It is recommended to use barrier creams to provide additional skin protection. If the product contacts eyes, flush with plenty of fresh water and seek medical advice.

Refer Material Safety Data Sheet for further details.

Technical Support

For further 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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