

CIKOcoat EPU



Flexible Epoxy-Polyurethane Hybrid Protective Coating

Description

CIKOcoat EPU is a two-component material based on Epoxy-Polyurethane resin providing an environmentally friendly flexible coating with an excellent chemical and abrasion resistance.

Properties

- Easy to use: brush , roller or spray application
- Cost reducer as no primer is required
- Good abrasion resistance
- Provides excellent adhesion to substrates
- Flexible coating
- Environment friendly
- Excellent chemical resistance
- UV resistance
- Anti- Bacterial properties
- Impermeable protective coating with excellent resistance to underground environment
- Crack bridging properties

Application area

CIKOcoat EPU is suitable to use both in industrial and commercial segments such as:

- Wall and floor coating for concrete protection
- Water retaining structures such as potable water tanks, reservoirs, water treatment tanks etc.,
- Lining for sewage and effluent plants
- Top coat on epoxy or polyurethane screed for interior application.
- Manhole and pipe lining
- Secondary containments
- Foundation waterproofing
- Base coat for exterior application.
- Warehouse flooring
- Reservoir and water treatment plants
- residential garage and basement areas
- coating for internal car park system

Applicable Standards

CIKOcoat EPU complies with Qatari Construction Specification QCS.

Physical properties @ 25°C

Form	Two component Part-A : Liquid Part-B : Liquid
Colour	Wide variety of colour is available
Mixing ratio	Pre-weighed packs
Mixed Density	1.3±0.05 kg/L
VOC (EPA 24)	<50 g/l
Pot life @25°C	40-60 minutes
Tack Free Time	within 6 hrs
Over coating	8 to 24 hrs
Full cure	7 days
Adhesion strength ASTM D4541	>3.5 MPa
Tensile Strength ASTM D412	>10 MPa
Elongation at break ASTM D412	>50%
Solid content	99-100%
Service temperature	-20°C to 70°C
Tear Resistance ISO 34	>85 N
Shore D hardness ASTM D2240	60±3
Water Penetration DIN 1048-5 (5 Bar)	NIL
Water Absorption BS 1881-122	0%
Abrasion Resistance ASTM D4060(CS10, 1kg, 1000cycles)	<0.02 mg
Thermal coefficient of expansion ASTM C-531	46.8 x 10 ⁻⁶ mm/mm/degree C

Chemical & Environmental Resistance

CIKOcoat EPU is resistant to a wide range of chemicals when tested in Accordance to ASTM D543. Specific data is available on request. Resistance to occasional spillages include:

Test Solution	Test Conditions	Observation & Test Result
Sulphuric acid	23± 2°C (24 hours)	No Characteristics Observed (Resistant)
Hydrochloric Acid		
Nitric Acid		
Acetic Acid		
Lactic Acid		
Sodium Hydroxide		
Ammonium Hydroxide		
Sodium Chloride		
Ferric Chloride		
Raw Sewage Water		
Sea Water		
Petrol		
Kerosene		
Hydraulic oil		
Vegetable oil		
Toluene		

Coverage

CIKOcoat EPU will provide coverage of 5.0m² per litre at 200 microns wet film thickness.

Note: The coverage depends on the substrate type, condition and finish. Consult our technical service department for assistance.

Application instructions

Surface preparation

The concrete surface should be free from dust and loose particles. All contamination such as oil, grease and extraneous spillages has to be cleaned using the suitable cleaning agent. Concrete shall be grinded, grit blasted or treated with equivalent and suitable mechanical means prior to the application of CIKOcoat EPU.

All surface irregularities, blowholes shall be repaired and resurfaced using CIKOpox Putty as per its respective technical data sheet.

Priming

Priming is not required on properly prepared concrete surfaces. However, on highly porous substrates it is advisable to apply a single coat of epoxy based primer among CIKOpox Prim ranges.

Mixing

The base component [Part-A] of CIKOcoat EPU should be mixed thoroughly using a heavy duty slow speed drill-paddle assembly for two minutes and ensure that all settled particles are dispersed and that a homogenous mix with uniform colour is obtained.

Pour the hardener component [Part-B] into the mixed base component [Part-A] and mix well for 3 to 5min to achieve a homogeneous and uniform consistency.

Application method

Properly mixed material should be applied using brush, roller, or spray over the clean and dry substrate, maintaining the required thickness.

A minimum of two coats application is recommended to obtain a full-unbroken coating.

The first coat has to be applied with a minimum wet film thickness of 200 microns and kept for minimum of 8 hours and maximum 24 hours at 30°C before application of the second coat at the same minimum wet film thickness of 200 microns.

CIKOcoat EPU may be used in conjunction with glass fibre cloth where necessary, to bridge fine cracks in the substrate. The cloth should be laid directly on the first coat whilst wet and should be pressed firmly and smoothed out with a stiff nylon brush or split washer roller. The second coat should then be applied, allowing no more than 24 hours at 30°C between coats, and again achieving a wet film thickness not less than 200 microns.

Cleaning

Equipment is to be cleaned with CIKOsol immediately after usage.

Contact CIKO technical team for more giddiness and information.

Precautions

Prior application of CIKOcoat EPU, ensure that

- The substrate moisture content is less than 4%.
- The ambient temperature is between 10 – 45°C.
- The substrate temperature is between 10 – 35°C and at least 3°C above dew point temperature.
- The relative humidity is below 75%.

Packaging

CIKOcoat EPU is available in 4.0 litre and 15 litre kits consisting of Part-A & B.

Shelf life

CIKOcoat EPU has a shelf life of 12 months if, stored in accordance with CIKO instructions.

Storage

CIKOcoat EPU should be stored under enclosed shaded area at temperatures between 5 – 35°C.

Health & safety

CIKOcoat EPU 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 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