

CIKOcoat T200

(Supersedes CIKOcoat T90)



Coal Tar Epoxy protective and waterproof coating

Description

CIKOcoat T200 is high solids, two components coal tar epoxy coating designed to provide a protective and water barrier system for properly prepared concrete and steel substrates.

The cured coating exhibits excellent resistance to aggressive environment when used in below grade applied at total thicknesses ranging between 0.4 and 0.6 mm. CIKOcoat T200 adheres and performs perfectly to concrete and treated steel without the need of priming at wide range of service temperatures.

CIKOcoat T200 is based on epoxy liquid resin, extended with coal tar and special additives cured with special grade of hardener to provide a Semi-flexible film with excellent chemical, abrasion and impact resistance.

Properties & Advantages

- Two component cold applied system.
- Easy maintenance and good resistance to fuel, kerosene, sewage, soil and most chemicals.
- Excellent adhesion to non-primed concrete and treated steel
- Extends lifetime of concrete by providing a barrier to chlorides, water, soil chemicals, etc.
- Hard wearing surface exhibits good wear and abrasion resistance.
- Protects against corrosion and aggressive environment
- No primer is required

Application Area & Uses

CIKOcoat T200 is a suitable protective coating and water barrier to concrete and steel structures used in many segments such as,

- Sewage treatment plants.
- Below ground protection of concrete
- Power plants and gas refineries.
- Pipe coating.
- Manholes and drainages

Physical properties

Form	Two component system Part-A: Liquid Part-B: Liquid
Colour of mixed material	Black
Solid Content	90 ± 1 % by weight
	88 ± 1 % by volume
Mixed Density	1.52 ± 0.02 kg/L
Mixing Ratio A:B	5:1 by volume
Pot life	90-120 minutes @25°C
	60-90 minutes @35°C
Tack Free	6-8 hours @25°C
	4-6 hours @35°C
Overcoating time	Minimum 10 hours
	Maximum 36 hours
Final cure	7 days @ 25°C
Application temperature	+5°C to +40°C
Thermal Compatibility with concrete and steel/ Service Temperature	-20°C to +70°C
Pull off Strength ASTM D7234/ ASTM D4541	≥1.5 N/mm ² (Concrete Failure)
	≥4 N/mm ² (Treated Steel)
Water Absorption of concrete coated with CIKOcoat T200 BS 1881:122	NIL (0%)
Water Absorption ASTM D570	≤0.9 %
Abrasion Resistance ASTM D4060 (CS17,1000 cycles, 1kg)	≤0.15 g

Applicable Standards

CIKOcoat T200 complies with Qatar Construction Specification QCS- Section of drainage works, Part of coating and painting materials.

Chemical Resistance

CIKOcoat T200 is resistant to a wide range of chemicals when tested in Accordance to ASTM D543 at ambient conditions for a period of 7 days following the patching method. Specific data is available as per the following table:

Test Solution	Observation & Test Result
Ammonium hydroxide (15%)	No Characteristics Observed (Resistant)
Sodium hydroxide (25%)	No Characteristics Observed (Resistant)
Sodium chloride (10%)	No Characteristics Observed (Resistant)
Ferric Chloride (15%)	No Characteristics Observed (Resistant)
Raw Sewage Water and treated Sewage effluent	No Characteristics Observed (Resistant)
Sea Water	No Characteristics Observed (Resistant)
Toluene	No Characteristics Observed (Resistant)
Petrol	No Characteristics Observed (Resistant)
Gasoline	No Characteristics Observed (Resistant)
Kerosene	No Characteristics Observed (Resistant)
Diesel	No Characteristics Observed (Resistant)
Hydraulic oil	No Characteristics Observed (Resistant)
Vegetable oil	No Characteristics Observed (Resistant)
Hydrochloric acid (10%)	Slight discoloration only without disintegration (Resistant)
Nitric Acid (10%)	Slight discoloration only without disintegration (Resistant)
Phosphoric acid	Not Resistant
Sulphuric acid	Not Resistant

Coverage

20 kg kit CIKOcoat T200 covers 57 to 59 m² at 200 microns dry film thickness.

Minimum 2 coats are recommended to achieve minimum 400 microns total DFT over concrete and 300 microns DFT over steel.

The total dry film thickness depends on life service requirements, applications area and project specifications. Consult CIKO Technical department for further assistance and advice.

The given coverage figures are theoretical. Actual coverage may be reduced depending on the substrate type, substrate condition, wastage and finish.

Application instructions

Surface preparation and repair of concrete

The concrete surface should be free from dust, loose particles or improperly bonded cementitious layers. Any traces of oil or grease over the surface shall be cleaned by acid etching or suitable decreasing agent and flushed with plenty of clean water then kept enough time to fully dry to attain a surface moisture content less than 4%.

It is recommended to apply CIKOpoxy Putty, CIKOpoxy FC or CIKOMortar FC to repair and resurface concrete to achieve a surface free of pin holes, potholes or irregularities.

Surface preparation of Steel

Metal surfaces shall be grit or sand blasted to a bright finish meeting the requirements of Swedish standard SA 2^{1/2} or equal. Clean the surface well post treatment. Newly cleaned steel must be coated as soon as possible before formation of rust or scale.

Mixing

The base component [Part-A] of CIKOcoat T200 should be mixed thoroughly using a heavy-duty adjustable speed drill fitted with paddle and ensure a homogenous mix. The hardener component [Part-B] should be poured into the base component [Part-A] and mixed well until a homogenous mix is obtained.

Application of topcoats

Properly mixed material should be applied using brush, high-quality medium nap epoxy roller or airless sprayer at a rate ranging between 0.2 and 0.25 L/m²/coat over the clean and dust free surface maintaining the required thickness.

It is recommended to back roll the surface to achieve a homogenous distribution of materials. Apply the second coat at the same consumption rate adhering to the allowed overcoating time; Failure to abide requires sanding and abrading the surface using the suitable grit size of sandpaper to increase the mechanical bonding.

It is always recommended to apply CIKOcoat T200 in two coats minimum achieving a minimum total thickness of 300 microns DFT over metal and 400 microns DFT over concrete.

Packaging

CIKOcoat T200 is available in 20 kg Kit (13 L) consisting of Part-A & B.

Shelf life

CIKOcoat T200 has a shelf life of 12 months if stored in accordance with CIKO instructions.

Storage

CIKOcoat T200 should be stored under cool enclosed shaded area at temperatures between 5°C and 35°C.

Precautions & Recommendations

- The substrate moisture content is less than 4%.
- The ambient temperature is between 5 – 40°C.
- The substrate temperature is between 10 – 35°C and at least 3°C above dew point temperature.
- The relative humidity is below 75%.
- Rain, water or condensate are not expected within 24 hours of application
- Do not apply CIKOCcoat T200 over movement joints and sealants.
- Exposure to direct sunlight and UV rays fades the colour over long exposure. if required, abrade and roughen the surface of CIKOcoat T200 and apply an additional thin coat of CIKOcoat UV333 to maintain or/and change the final coating colour.
- 5% up to 10% by volume CIKOsol/CIKOsolvent 20 may be added to ease spray application.

Health & safety

CIKOcoat T200 should not contact 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 for providing additional skin protection. If meets 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 expert.

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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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