Smart Chemical Solutions

# CIKOpoxy BM

## Epoxy resin based benching mortar

### Description

CIKOpoxy BM is a three component solvent free epoxy resin based benching mortar on concrete and other suitable substrates for thick bed applications.

CIKOpoxy BM is based on liquid epoxy cured with a special grade of hardener. It offers a tough seamless surface that can be built to higher thickness.

### Properties

- Three components, epoxy based benching mortar system.
- Exhibits good wear and abrasion resistance.
- Easy to clean and maintain hygienic surface.
- Resistance to wide range of aggressive chemicals including sewage and soil chemicals.
- Can withstand dynamic and static loads.

### Application area

CIKOpoxy BM is suitable for both in industrial and commercial segments such as,

- Sewage manholes and tanks.
- Sewage treatment plants.
- Dairies and chemical plants.
- Engineering workshops.
- Marine structures.
- Chemical and non-potable water storage tanks.

### Physical properties

| | |
|---|---|
| Form | 3 component system<br>Part-A & B : Liquid<br>Part-C : Solid |
| Colour | Grey in general |
| Mixing ratio | Pre-weighed packs |
| Pot life @ 25 $^0$C | 30-45 minutes |
| Final cure @ 25 $^0$C | 7 days |
| Allowable foot traffic | After 24 hours |
| Compressive Strength ASTM D-695 @ 7 days | >97 N/mm$^2$ |
| Flexural Strength ASTM C348 @ 7 days | >25 N/mm$^2$ |
| Tensile Strength ASTM D638 @ 7 days | >8 N/mm$^2$ |
| Bond Strength ASTM D7234 @ 7 days | >2.5 N/mm$^2$<br>Failure in concrete |
| Tear Resistance ISO34-1 (Method B) @ 7 days | ≥ 70N/mm |
| Abrasion Resistance ASTM D4060 (CS10, 1000 cycles, 1kg) | ≤ 20mg |

## Chemical resistance

CIKOpoxy BM is resistant to a wide range of chemicals. Specific data is available on request. Resistance to occasional spillages include when tested as per ASTM D543:

| Test Solution | Test Conditions | Observation & Test Result |
|---|---|---|
| Sulphuric acid | 23± 2ºC (24 hours) | No effect 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

CIKOpoxy BM will provide coverage of 2.5m$^2$ per pack of 25 kg @ 5mm thick.

In general the coverage depends on the substrate condition and finish. Consult CIKO technical service department for further guidance.

## Application instructions

**Surface preparation**

New concrete substrate:

The new concrete substrate should complete the process of curing and should have a dry surface. The surface should be prepared using mechanical scrubbers to remove loose and un-bonded particles. Surface diamond disk grinding or shot basting shall be done to totally remove any type surface film forming materials.

Old concrete substrate:

All contamination such as oil / chemical spillage or pot holes should be treated. The surface should be prepared using mechanical grinding or by scrubbing to remove loose and un-bonded particles.

**Priming**

The base [Part-A] and hardener [Part-B] components of CIKOpoxy Prim11/14 should be mixed thoroughly using a heavy duty slow speed drill-paddle assembly for three to five minutes and ensure a homogenous mix. Application of primer should be carried out as per the respective technical data sheet. Properly mixed primer should be applied using brush or roller and allow becoming tacky for the application of benching mortar.

**Application of benching mortar**

The base [Part-A] and hardener [Part-B] components of CIKOpoxy BM should be mixed thoroughly using a heavy duty slow speed drill-paddle assembly for two to three minutes and ensure a homogenous mix. Dispense the third component [Part-C] slowly into the mix and continue mixing for further few minutes until a homogenous mix and colour is obtained.

Properly mixed material should be spread over the clean and tacky primed surface using trowel maintaining the required thickness and levelling.

Note: It can also be applied by wet on wet method to achieve smooth finishing, it is recommended cleaning the steal trowel surface with CIKOsol or CIKOsolvent-20.

## Precautions

Prior application of primer and CIKOpoxy BM, ensure that

- The moisture content of the substrate is less than 4%.
- The ambient temperature is between 10 – 45$^0$C.
- The substrate temperature is between 10 – 35$^0$C and at least 3$^0$C above dew point temperature
- The relative humidity is below 75%.

## Packaging
CIKOpoxy BM is available in 25 kg packs consisting of Part-A, B & C.

## Shelf Life
CIKOpoxy BM has a shelf life of 12 months if stored in accordance with CIKO instructions.

## Storage
CIKOpoxy BM should be stored under enclosed shaded area at temperatures between 5 to $35^0$C.

## Health & safety
CIKOpoxy BM 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*
- *Moulding compounds*





ص . ب رقم : ٢٩٥ , الدوحة - قطر
ت : ٤٤١١ ٤٧٨٧ , ٤٤١١ ٤٧٩٠ , ٤٤١١ ٤٧٩٤ ٩٧٤+
فاكس : ٤٤١١ ٤٧٩٢ ٩٧٤+
P.O.Box : 295, Doha, Qatar
T.: (+974) 4411 4787 / 4411 4790 / 4411 4794
F.: (+974) 44114792
E-mail: enquiries@cikome.com