

# CIKOcem Terrazzo



## Cement based binder for seamless terrazzo

### Description

CIKOcem Terrazzo is single component polymer modified cement-based binder used to produce seamless cementitious terrazzo screeds. It creates a tough and smooth surface suitable for luxurious decorative floor systems.

CIKOcem Terrazzo is a blend of specially selected cement, graded aggregate, polymers and other polymer additives to provide a tough smooth and high abrasion resistant surface applied over suitable concrete and screed substrates. It offers a seamless floor having a thickness of 5 mm up to 40 mm depending on mix design and aggregates size.

### Properties & Advantages

- Single component cement-based system.
- Seamless floor topping having thickness ranging from 5mm up to 40 mm. (depending on aggregates size)
- Easy to apply (depending on Matrix design)
- Exhibits excellent adhesion to primed substrates.
- Early development of strength even at 6 hours and high final strength at 28 days
- Can be easily grinded and polished resulting in a smooth finish.
- Extended working time and pot life
- Good resistance against carbon monoxide and chloride penetration result of low water/binder ratio.
- Good weathering resistance
- Good sulphate resistance
- Controlled shrinkage and expansion under dry conditions. Wet curing minimizes the risk of micro-cracking.

### Applicable Standards

CIKOcem Terrazzo complies with the minimum performance requirements of EN 13813. Depending on the aggregate grading and water addition the resulting screeds meets class CT- C25-F5 up to CT- C50-F7.

### Application Areas & Uses

CIKOcem Terrazzo is suitable to be applied both indoor in commercial and residential segments as a decorative floor finish in offices, shopping malls, restaurants, cafeterias, auditoriums, pharmacies, halls, etc.



## Physical properties

Form	Single component powder system
Colour	Selected colour range
W/P	0.18-0.19 (Binder)
Workability	30-35 minutes @ 25°C
Fresh Density	1.40±0.05 Kg/L (Binder)
Pull off Bond Strength to primed concrete	≥1.5 N/mm <sup>2</sup> (28 days)
*Compressive Strength ASTM C109 (dry curing) (depending on mix Design)	≥15 N/mm <sup>2</sup> (3 days) ≥20 N/mm <sup>2</sup> (7 days) ≥30 N/mm <sup>2</sup> (28 days)
*Flexural Strength ASTM C348 (dry curing) (depending on mix design)	≥8 N/mm <sup>2</sup> (7 days) ≥11 N/mm <sup>2</sup> (28 days)
VOC USEPA 24	<10g/l

\*The physical properties are strictly related and dependant on the mix design and specified finished terrazzo product.

## Application Instructions

### Surface preparation & conditions

The concrete surface should be fully cured achieving a minimum compressive strength and pull off strength of 25 MPa and 1.5 MPa respectively.

The concrete surface should be free from dust and loose particles. In case of traces of oil and grease, the surface shall be treated by acid etching, sand/grit blasting, or any other suitable mechanical means. Curing compounds and sealers, if present, must be removed by mechanical grinding using diamond disk. The final step in cleaning should be complete removal of all residues with a vacuum cleaner or water-pressure washing.

All cracks, holes, leakages and irregularities must be repaired and treated with the suitable concrete repair and injection materials from CIKO's wide range of products. Consult CIKO technical department for further support.

Concrete surfaces are to be mechanically prepared to remove laitance and achieve a flat surface, grit blasting or surface profiling equipment are preferred. The surface moisture content of concrete substrates must not exceed 5% and a water vapor emission strictly less than 0.6 g/m<sup>2</sup>h.

Concrete surfaces are to be mechanically prepared to remove laitance and achieve a flat surface, grit blasting or surface profiling equipment are preferred. All joint details must be addressed prior to any application.

### Damp and wet substrates

At higher moisture levels or in case the moisture levels in the substrate are expected to increase, an effective moisture vapor barrier is required on or below grade. please consult CIKO Technical Department for technical advice on the correct material to address corrective procedure.

### Guidelines to mix designs and coverages

	25Kg binder / 25Kg Aggregates (depending on mix design)
	5.0 – 5.6 L of water
*Mixing ratio – CIKOcem Terrazzo	It is optional to replace up to 50% of the amount of water added by CIKObond AC or CIKObond SBR. CIKO recommends this as an enhancing admixture depending on types of aggregates, required workability and setting time.
	~2.1m <sup>2</sup> / 25kg bag Binder @ 10mm thick (Applied)
*Coverage - CIKOcem Terrazzo	The coverage varies based on the mix design, type of aggregate, Water/binder ratio and substrate conditions. It is recommended to conduct trial for more accurate coverage.
	1Kg of Binder shall be mixed with 0.35 L up to 0.4 L of clean potable water to achieve the required consistency. It is applicable and optional to replace half the quantity of water with CIKObond AC or CIKObond SBR.
*Mixing ratio - CIKOcem grout	
*Coverage - CIKOcem grout	0.250 kg/m <sup>2</sup> / layer (Depending on surface condition and applied thickness)

\*The mixing ratios and coverages are strictly related and dependant on the mix design and specified/approved finished terrazzo product.

### Application of CIKOpoxy Prim 14

The base [Part-A] and hardener [Part-B] components of CIKOpoxy Prim14 should be mixed thoroughly using a heavy duty, slow speed drill paddle assembly for minimum three minutes and ensure a homogenous mixture is obtained.

Properly mixed material should be applied using brush or high-quality epoxy roller over the dry and clean surface at the rate of 0.2 L/m<sup>2</sup> up to 0.3 L/m<sup>2</sup>.

Immediately and whilst tacky broadcast CIKO ASG (0.5-1 mm) uniformly over the wet coat at a consumption rate of 1.5 to 3 kg /m<sup>2</sup>. The coated surface should be left to cure for 12 up to 24 hours, depending on the prevailing ambient conditions and prior application of CIKOcem Terrazzo.

### Application of CIKOcem Terrazzo

Remove access of aggregate CIKO ASG and clean the surface well using a broom followed by industrial vacuum. Ensure that the surface is free of loose and unbonded aggregate prior to the application.

CIKOcem terrazzo is a ready to mix material that requires the addition of 5.0 L up to 5.60 L of potable water per 25 kg bag of binder and 25 Kg of selected aggregates. Amount of water and aggregates added can be slightly adjusted depending on mix design, required consistency and colour. Measure the required amount of potable water for each batch mix and dispense into the mixer. Add gradually CIKOcem terrazzo binder into the mixer while it is in the mode, continue mixing for approximately 2 minutes and then add gradually to the mix the required amount of aggregate. Mix all components at high speed until a homogenous and lump free mixture is achieved.

#### Note:

Use chilled/cold water to extend the workability of the mixed material. The mixed fresh CIKOcem terrazzo should have a temperature of less than 25°C.

Continuous mixing and pouring within a lap of 3 minutes are recommended. (Sufficient manpower is required)

Pour the properly mixed materials over the clean primed surface at the required thickness set by the aluminium divider strips. Spread evenly the freshly laid materials by the aid of aluminium bar or a smooth steel trowel. Finishing should be done with a smooth steel or plastic trowel.

Note: Never Apply CIKOcem Terrazzo over joints or untreated cracks as this will most likely result in surface cracks.

### Precautions

- If the mixed materials stiffen do not remix with water; the batch should be discarded.
- Do not exceed the recommended water content and only use cool potable water.
- The ambient temperature is between 5 & 35°C.
- The substrate temperature is between 5 & 35°C.

### Curing & Protection

Protect the applied surface for at least 24 hours prior to further steps. Curing for the finished is not required in normal condition. In case of harsh condition such as direct sunlight, high ambient temperature, severe wind and drying conditions, cover the applied screed with polyethylene sheet after initial setting to retain moisture.

### Grinding

Dry-polishing with a diamond-tipped grinder shall be carried out 2 to 3 days post the application of CIKOcem Terrazzo dependent on ambient, substrate temperatures and weather conditions. This must be completed as per applicator requirements and expertise.

### Grouting & Patching

Post the grinding treatment, the screed surface will show minor blow holes, air bubbles and micro-pores. the screed surface must be grouted using CIKOcem Terrazzo powder grout. This procedure must be carried out in 2 to 3 applications until a uniform and well filled surface is achieved. 1 kg of CIKOcem Terrazzo powder grout shall be mixed with 0.35 L up to 0.4 L of clean potable water to achieve the required consistency using a heavy- duty adjustable speed drill mixer. It is applicable and optional to replace half the quantity of water with CIKObond AC or CIKObond SBR.

CIKOcem Terrazzo binder can be used only for minor repairs, for larger repairs please consult CIKO Technical department.

### Sealer coat

CIKO has a wide range of clear sealers, the selection of the appropriate type of sealer depends on service life, intended to use location, project requirements and specifications. Consult CIKO Technical Department for further support.



## Recommendations

Mock-ups and field test areas are required in order to validate performance and appearance related characteristics to ensure system performance as specified for the intended use, and to determine approval of the decorative floor system including but not limited

- Colour.
- Inherent surface variations.
- Wear and abrasion resistance.
- Chemical resistance and stain resistance.

Job site variability must be confirmed and assured including but not limited to:

- Surface preparation
- Sunlight and exposure
- Relative humidity
- Dew point temperature
- Ambient and substrate temperature

During application of CIKOcem Terrazzo, the surface may lead to fisheyes, blistering, pinholes, wrinkling, etc. these are not product defects. Priming, shading or evening application may be required. Refer to Precaution section and notes for further details

CIKOcem Terrazzo must be only applied by CIKO's approved and professional applicators.

## Maintenance

The long-term performance, appearance, and life expectancy of wear surface products are critically dependent upon a good routine maintenance program designed specifically for the installed wear surface. CIKO ME floor systems are nonporous, causing dirt and contaminants to remain on the surface. The use of properly placed walk-off mats or sealer coats, inside and outside, will help increase the life of the floor. Recommended maintenance program consists of frequent and thorough cleaning utilizing a neutral pH cleaner.

Frequency of washing will vary depending on floor usage type, traffic and age. CIKO ME Floor Maintenance Guide available upon customer's request.

## 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.

## Cleaning

Used tools must be well cleaned with water directly after usage.

## Packaging

CIKOcem Terrazzo is available in 20 kg & 25 kg bags

## Storage

CIKOcem Terrazzo should be stored under enclosed shaded area at temperatures ranging from 5 to 40°C

## Shelf life

CIKOcem Terrazzo has a shelf life of 9 months if stored in accordance with CIKO instructions.

## Health & safety

Use standard dust mask to avoid inhalation of dust. Powder when wet or moist can cause burns to skin and eyes which should be protected during use. If meets skin/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