

# Cerrazzo Cem

Thin Modified, Cementitious terrazzo flooring

## Description

Terrazzo floorings had descended directly from Rome, when Venetian mosaic workers discovered a way to reuse the marble remnants. These castoffs were mixed with cement, then ground and polished to expose the hidden chips, resulting in astonishing designs. Since then, the terrazzo floors, recognized for its glimmering beauty, started enticing architects all over the world. The major drawbacks of cementitious terrazzo floorings are the long time to reach the strength to grind and polish, poor compressive strength and thick set (50 mm). Cipy Polyurethanes has developed Cerrazzo Cem, a new cementitious terrazzo flooring with specially formulated hydraulic binders which overcome the deficiencies of conventional cementitious terrazzo floorings

## Uses

- Cerrazzo Cem floorings are extensively used in airports, shopping malls, recreation areas, bars, clubs, retail stores to name a few.

## Key features

- Thin-set and medium weight (15 mm)
- Stronger than concrete
- Seamless

## Properties

Type	: Modified Hydraulic binders
Mixed Density ASTM D 1475	: 2.4± 0.05 gm / cc
Pot life @ 27°C ASTM D 2471	: 10 - 15 min
Drying time ASTM D 1640	
Surface dry	: 1 - 2 hours
Hard dry	: 24 hours
Recommended For clean up	: Water
Shelf life	: 6 months in the unopened container

## Performance data

Compressive strength ASTM D 695 (28 days)	: 50 MPa
Tensile strength ASTM D 638	: 5-6 MPa
Flexural strength ASTM D 790	: 11-14 MPa

Adhesion test, pull off

ASTM D 4541 : Concrete failure

## Directions to use

The concrete floors should be minimum 28 days old and be clean, dry and sound. The compressive strength of the concrete sub floor should be minimum 25 MPa. The concrete surface should be roughened by vacuum assisted diamond grinding equipment wherever necessary. Loose concrete, laitance etc to be removed too and the entire area cleaned and made free of dust as far as practicable by using broom.

## For levelling

The floor surface should be perfectly even before Cerrazzo Cem system is laid at the recommended thickness. All floor undulations are levelled by high strength cementitious underlay, Cipcem HD if levelling is required. Allow to cure for 48 hours.

## Installation of demarcation trims

Transition strips to be used are of heavy duty aluminium, brass or zinc alloy. The depth will be equal to the specified Cerrazzo Cem floor thickness (plus 2-3 mm). The trims are installed at all terminations and either side of all movement joints. The depth will be equal to the final finished specified floor thickness plus 3 mm (to be grinded off), ie 18 mm. The trims are fixed as per the architect's design, using gun grade polyurethane or similar adhesive.

## Primer : Hydrokrete

The prepared concrete substrate is primed using Hydrokrete @ 100 microns per coat. The primer can cure until tack free (1-2 hours) and for a maximum of 24 hours prior to being overlaid by Cerrazzo Cem. If the substrate is found to be excessively porous, it may be necessary to apply a second coat of primer.

## Application of Cerrazzo Cem

Cerrazzo Cem is supplied in 25 Kg bags. Take required quantity of water (4-5 kg depends on mix design) and pour into a clean mixing vessel. Empty the contents of the bag under slow stirring. Mixing is continued till a homogeneous mixture is obtained. The mixed material is then transferred to the screed box. The screed box is set to lay the screed at the desired depth (plus 2mm), in order to match the height of the demarcation trims. The screed box is pulled across the floor, leaving the required quantity of screed. The matrix is finished with a steel trowel to a flat and even finish. Allow the Cerrazzo Cem to cure for a minimum of 3 hours after which it should be inspected to check the even distribution of the aggregates. If there are bald spaces appearing, these areas are topped up by applying freshly prepared

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screed and spreading evenly using the flat squeegee to fill the bald spaces. The screed can cure for a minimum 24 hours to acquire the required strength to withstand grinding and polishing operations.

### Grinding

The purpose of the grinding process is to level the screed surface and evenly expose the aggregates. The Cerrazzo Cem screed is ground dry, using vacuum assisted floor polishing and grinding equipment using 20 or 40 grit grinding heads. Multiple passes of the grinder will be required to remove approximately 2 mm of screed,

### Grouting

The grinding process using diamond grit grinders, exposes the voids caused by air bubbles in the screed and aggregate pop-outs, which are then filled up, Unpack Cerrazzo Cem grout into a clean container and prepare a mix by adding 250 gm of clean water for 1 kg of powder, mix thoroughly using a slow speed electric mixer for 2-3 minutes. The grout is applied using a flat rubber squeegee or grout trowel and allowed to cure overnight. Re-grouting may be required if the voids remain on the surface.

### Polishing

Polishing operation is carried out using vacuum assisted floor polishing grinding equipment like HTC, Blastrac or similar. The polishing process is a multi-phase process where increasingly fine diamond polishing heads are used to produce the gloss level required..

### Sealing

Over the polished Cerrazzo Cem, an aliphatic PU sealer coat, Duraseal is applied to enhance gloss and wear resistance. Duraseal is poured directly onto the floor and spread with a flat mop to provide an even streak free finish and can cure for a minimum of 12 hours prior to opening the area to traffic

### Handing over

The polished Cerrazzo Cem system may be opened to full traffic 24 hours after the sealer coat is applied. The surface should not be cleaned with water for 24 hours or cleaning chemicals for 48 hours..

### Cleaning

The screed materials should be removed from all tools, including roller frames, mixers, screed boxes and trowels using water prior to curing of the material. The cured material can only be removed mechanically.

### Packaging

Cerrazzo Cem is packed in air-tight plastic bags and has a maximum shelf lives of 9 months in the unopened containers.

### Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children.

### Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. In case of splashes on the skin, dampen the cloth with water and wipe the hands with the cloth. Wash then with soap and water. Dried film is non-toxic. In case of contact with eyes, rinse with plenty of water and seek medical advice. In case of continuous exposure to vapour, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations. .

### Disclaimer

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