

# Cerrazzo

## Thin-set epoxy 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. In recent years, cement was replaced by epoxy as binder which resulted into the growth of the third generation of thin set terrazzo floorings. Overcoming the deficiencies of cementitious terrazzo floorings, Cerrazzo employs a specially formulated epoxy resin, mixed with decorative marble, granite or glass chips, to bring out multicoloured patterns and designs in vibrant shades.

Uses	Key features	
Cerrazzo floorings are extensively used in airports, shopping malls, recreation areas, bars, clubs, retail stores to name a few.	<ul style="list-style-type: none"> <li>Thin-set, light weight and seamless</li> <li>Unlimited colours and patterns</li> </ul>	<ul style="list-style-type: none"> <li>Low maintenance cost</li> <li>Non-staining and non-absorbent</li> <li>High durability</li> <li>High wear resistance</li> </ul>
Properties	Performance data	
<b>The mandatory performance parameters as per NTMA guidelines.</b>		
Type : Epoxy	Adhesion pull off test : $\geq 2.5$ MPa ASTM D 7234 - 2022	Concrete failure
Mixing ratio : Pre-weighed packs	Slip resistance : 50 - 58 (low risk of fall) BS 7976 (PTV)	
Finish : Smooth glossy	<b>Other mechanical properties</b>	
Pot life : 30 minutes ASTM D 2471	Compressive strength : 70 MPa ASTM D 695	
Drying time : 1 hrs ASTM D 1640	Flexural strength : 20 MPa ASTM D 790 - 2017	
Surface dry : 6 hrs	Tensile strength : $> 20$ MPa ASTM D 638	
Tack free dry : 24 hrs	Hard dry : 24 hrs	
Solid content by wt : 98% ASTM D 2369	Shore D Hardness : $> 70$ ASTM D 2240-2015	
Application : By trowel	Water absorption : $< 0.10\%$ ASTM D 570	
Recommended thinner : Clean up : PUT 502	Elongation : $> 7\%$ ASTM D 638	
Shelf life : 12 months in the un-opened container	Flammability : Class 1 BS 476 : 7 : 1997	
	Coefficient of linear thermal expansion (mm/mm <sup>0</sup> C) : $25 \times 10^{-6}$ ASTM D 696 - 2003	

TYPE 8 EFNARC GUIDELINE

HEAVY DUTY SCREED FLOORING

**Note :** The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary, dependent on actual site conditions

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### Chemical resistance

■ Distilled water	: No stain	■ Isopropanil Ethanol	: No stain
■ 0.025 Detergent solution	: No stain	■ 10% Sodium hydroxide	: No stain
■ 1% Soap solution	: No stain	■ 10% Hydrochloric acid	: No stain
		■ 30% Sulphuric acid	: No stain

### Cerrazzo components

- Epoxy primer : Cipoxy 16
- Epoxy terrazzo : Cerrazzo
- Epoxy grout : Cerrazzo grout
- PU sealer : Duraseal

### Directions to use

The concrete floors should be minimum 28 days old and be clean, dry and sound. The residual moisture should not be greater than 5%. The compressive strength of the concrete sub floor should be minimum 25 MPa. For surface preparation of concrete, refer to SSPC-SP13/ NACE 6 "surface preparation of concrete" for detailed guidelines. The entire surface should be roughened by abrasive grinding machine to remove all laitance and obtain a surface profile of CSP 4-6. Crack detailing is necessary to ensure that fractures in the concrete substrate are not propagated into the Cerrazzo floor topping. Typically, crack detailing is achieved by the use of epoxy system. Crack repair to be done as per standard crack repair method statement defined by PIL. Laitance needs to be removed together with all construction contaminants by vacuum assisted diamond grinding equipment.

### Floor repairs and levelling: Cipikrete HS

The floor surface should be perfectly even before Cerrazzo system is laid at the recommended thickness. All floor undulations are levelled by high strength epoxy self-levelling screed, Cipikrete HS. Allow to cure overnight.

Surface defects such as cracks, honeycomb pitting, floor patches etc are filled up by an epoxy repair mortar, Cipikrete.

### Storage

Store under warehouse conditions below 35 °C in the original, unopened packs. If stored at high temperature and/or at high humidity conditions, the shelf life will be reduced.

### Installation of trims / dividers

Transition strips to be used are of heavy duty aluminium, brass or Zinc alloy. The depth will be equal to the specified Cerrazzo floor thickness(plus 2mm). The trims are installed at all terminations and either side of all movement joints. Where patterns are to be formed, the trims will be set out and marked on the floor and are then adhered by a suitable adhesive / screws. Should curved patterns be required, serrated angle trim is used to permit the trim to be bent to shape.

### Application of Cerrazzo

Primer: Cipoxy 16 / 17 : The prepared concrete substrate is primed using Cipoxy 16 @ 200 microns per coat. The primer is allowed to cure until tack free and for a maximum of 24 hours prior to being overlaid by Cerrazzo screed. If the substrate is found to be excessively porous, it may be necessary to apply a second coat of primer.

### Cerrazzo Screed

Cerrazzo screed is supplied in a set of 4 component units, made up of resin, hardener, colour pack and decorative aggregates. The entire contents of the hardener component are added to the resin component and mixed with a slow speed electric mixer for 2-3 minutes until a homogenous mix has been achieved. Add the colour pack and aggregates under agitation and mixing continues for another 4-5 minutes so as to ensure that all decorative chips are fully wetted. 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 divider 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. The screed is allowed to cure for a minimum 24 hours so as to acquire the required strength to withstand grinding and polishing operations.

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### Grinding

The purpose of the grinding process is to level the screed surface and evenly expose the aggregates. The Cerrazzo screed is ground dry, using vacuum assisted floor polishing and grinding equipment starting with 20 or 40 grit grinding heads and increasing number in subsequent passes. 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 with Cerrazzo Grout. Cerrazzo Grout is a two component, viscous material containing resin and hardener. Unpack the two components and 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 still remain on the surface.

### Polishing

Polishing operation is carried out using vacuum assisted floor polishing grinding equipment. 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, 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 is allowed to cure for a minimum of 12 hours prior to opening the area to traffic.

### Material Coverage & Pack Size

#### Pack size

- Cipoxy 16 / 17 : 5 litre / 20 litre
- Cerrazzo : Preweighed set
- Cerrazzo Grout : Preweighed set
- Duraseal : 5 litre

#### Coverage

- Cipoxy 16 / 17 : 4-5 sqm / litre
- Cerrazzo : 24-26 kg / sqm
- Cerrazzo Grout : 5-8 sq m / kg
- Duraseal : 8-10 sqm / litre

Note: The above coverage rates are given for guidance for 12mm casting thickness only, as actual quantities used will vary depending upon the nature of substrate and design adopted at site.

### Health & Safety

Cipoxy 16, Cerrazzo, Cerrazzo Grout, Duraseal should not come in contact with skin and eyes or be swallowed. Avoid prolonged inhalation of solvent vapours. Some people are sensitive to epoxy resins, hardeners and solvents. Gloves, goggles should be used. Ensure adequate ventilation and if working in enclosed areas use suitable breathing apparatus.

#### Do's

- Clean regularly
- Remove aggressive chemical spillage immediately
- Maintain wheel for proper rolling, should not get dragged.
- Nylon / teflon wheel trolleys are recommended
- Handle heavy material gently and cautiously
- Immediately clean spillage of any oil or fatty liquid which may cause accident during people's movement

#### Don't

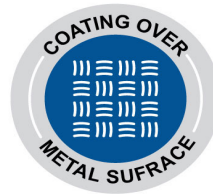
- Drag any sharp and heavy object. Movement of metal wheel trolley
- Expose to fire or welding spark
- Expose to very high temperature than recommended by Manufacturer
- Drop down any heavy material on the floor
- Expose to highly corrosive chemicals

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