

Technical Data Sheet

DECOFLOOR TERRAZZO EP

Highly Aesthetic Decorative Epoxy Terrazzo Flooring

Description:

DECOFLOOR TERRAZZO EP is a multicomponent, solvent free, thin set decorative epoxy terrazzo floor topping system that combines epoxy resin with colored pigments marble, colored glass, granite or other approved aggregates. It can be trowel applied at 8 to 12 mm nominal thickness, and then grinded and polished to expose a beautiful matrix of epoxy and aggregates.

DECOFLOOR TERRAZZO EP flooring provides an outstanding physical strength, durability, wear and chemical resistance decorative flooring with lowest life cycle cost of any flooring system.

Uses:

DECOFLOOR TERRAZZO EP is ideal for virtually indestructible decorative flooring in commercial, industrial and institutional facilities, especially where durability, long life and minimal maintenance are crucial. Some of the proposed, but not limited to, application includes:

- Utility service elements in commercial buildings
- Airport terminals, metro stations
- Multiplexes and auditoriums
- Shopping malls, retail stores
- Food processing, cafeterias, commercial kitchens
- Chemical processing plants
- Showrooms, hotel receptions
- Hospitals and other healthcare facilities
- Schools, universities, libraries

Advantages:

- Extensive color selection allows for unlimited design variations.
- The floor colors are permanent and will last the life of the floor without fading.

- Heavy duty flooring that withstands high traffic and heavy use.
- Low maintenance, scratch and stain resistant surface.
- Non porous, hygienic finish that prevents mold, moisture and microbial growth.
- Does not shrink, permitting installation of larger monolithic sections.
- High wear, impact, chemical and abrasion resistance.
- Solvent free, low odor during application and cure thin section, light weight than marble, granite & cement terrazzo – little or no structural weight loading implications.
- Easy to clean, low maintenance.
- Extremely durable, with low maintenance requirements which translates into lower life cycle costs.

Instructions for Use:

Surface Preparation:

Surface preparation is the most critical portion of any successful resinous system application. Each surface is treated differently depending on whether it is concrete, sand cement screed or a self-levelling surface.

All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease. Substrates must be properly tested for moisture. New concrete floors should be allowed to cure for at least 28 days with moisture content not exceeding 5%.

The floor must be shot blasted or diamond grinded to remove the weaker and friable elements on the concrete surface and to roughen the surface to ensure excellent mechanical adhesion. Existing joints must be respected. The surface must be well levelled to avoid over consumption of materials.

DECOFLOOR TERRAZZO EP

Badly damaged concrete or cracks need to be repaired. All necessary repairs should be made using MATEX epoxy Repair Products.

DECOFLOOR TERRAZZO EP is no-breathable, so it traps moisture vapor transmission coming up from the concrete slab. This can result in loosening of the epoxy topping or improper curing. When DECOFLOOR TERRAZZO EP is installed onto concrete slabs on grade, it is strongly recommended to install a good vapor barrier.

Surrounding areas should be covered and protected from material spills and equipment contact. Rope off working area.

Divider and control joint strips

Divider strips are either made of aluminum, brass, stainless steel or bronze. Types of dividers applications includes:

- 1) Standard/heavy top divider strips: One-piece, flat type strips for grouting into sawed joints prepared in the substrate.
- 2) Heavy top angle divider strips: One piece, L-type angle strips with anchoring device and in depth required for topping thickness indicated.
- 3) Control-joint strips: Separate, double L-type angles, positioned back to back, that match material and color of divider strips and in depth required for topping thickness indicated.
- 4) Accessory strips:
 - Base-bead strips for exposed top edge of terrazzo base
 - Edge-bead strips for exposed edges of terrazzo
 - Nosing for terrazzo stair edges and landings

The following instructions should be followed when fixing the dividers:

- The divider strips should be securely and permanently fixed to the substrate using EPOFIX T, a high strength epoxy adhesive. Mechanical fasteners may be used for additional security.
- Dividers should be fixed to the proper level in locations as indicated in the designed lay out.
- Place edging strips at doorway between DECOFLOOR TERRAZZO EP and other types of flooring and along the edges of terrazzo borders, adjoining other types of floor finishes.

- Install control joints and expansion joints using two divider strips back to back and directly above concrete slab joints.
- It is recommended to leave joints all around columns and along the entire perimeter of the laid terrazzo floor and filled with a flexible material to provide for movement.
- Standard flat type strip dividers are used to separate different colors or as design accents. Saw cut at least 10 mm deep groove in the concrete slab wherever a design element exists. Clean the groove by air gun then fix the strips in the groove with EPOFIX T-epoxy adhesive. Make sure that the top level of the strip is the top level of the finish floor.

Priming:

Apply ARMOPRIME EP-epoxy primer to the prepared substrate. While the primer is still wet, broadcast Quartz no. 2 or 3 at a rate of 1.0 to 2.0 kg per m². The applied primer will unify the surface absorption. Spreading of silica aggregates on the wet primer is highly recommended to enhance mechanical keying. Please refer to data sheet for application instructions of the primer.

Mixing:

Premix the resin (component A) using a slow speed drill and jiffy blade, for one minute. Add the hardener (component B) to the mixed binder and thoroughly blend for at least three minutes. Ensure to avoid air entrapment in the mix due to high speed or over mixing which might cause pinholes in the screed. Add 1 bag (20 kg) of epoxy filler & 2 bags (40 kg) of approved aggregate on the selected aggregate blend, to the above mix (Component A/ Component B) & continue mixing for 3-4 minutes, until all aggregates are wet out. A properly mixed batch of DECOFLOOR TERRAZZO EP should have a glistening wet appearance. Do not mix more material than can be applied within 30-40 minutes.

Application:

Place terrazzo mixture on primed surface. Spread material in a line or in small areas to assist troweling in a thickness at least 2 mm more than the final desired thickness after grinding and polishing. Do not pile material in large volume.

DECOFLOOR TERRAZZO EP

Spread with flat trowel or a gauge rake using the largest marble chip as a proper thickness guide. For large applied area finish levelling the terrazzo screed with a machine trowel to improve productivity and compaction of the casted terrazzo.

Ensure that all voids and corners formed by the design elements are completely filled by the mix. Use of a power trowel is highly recommended to ensure a level surface and good compaction. The topping must be left to cure for a minimum of 24 hours at 25°C before any grinding or polishing. Lower temperatures will require longer curing times.

If different colors of terrazzo mix are used, the sections are separated by divider strips. Divider strips, if thin and flexible, can be bent by hand on the jobsite or, otherwise, pre-shaped in the factory into intricate designs.

Grinding & Grouting:

Grinding should not take place before the applied flooring has been allowed to cure for a minimum of 24 hours. Longer curing times would be required at lower ambient temperatures.

Use only the highest quality diamond tools and professional, multi-head, floor grinding machines for good leveling and finish.

Start grinding with coarse metal bond diamond tool 30/40 grit to remove scratches and imperfections. Always grind progressively through all the pads from coarser to the finest. Jumping from a very coarse pad to a much finer pad or skipping stages will not remove the scratch marks left by the previous step. A good rule of thumb is to double the grit number with each successive polishing step. For example, the following grit number sequence could be 40, 80, 150, 250, 400, 800.

The initial grinding stages with metal-bond tools may be performed dry at low speeds. Polishing stages with resin-bond tools must be performed wet only. If 100% glass aggregate is used, wet grinding with a light weight grinder is recommended to avoid too much heat which may cause fracture in the glass. Consult with the machine and diamond tools manufacturer for their recommendations.

The initial grinding stages will leave pinholes in the matrix and may remove some of the aggregates. These holes must be filled with a grout composed of the epoxy and filler. Grout kits are supplied separately. After mixing the resin and hardener, add the filler slowly and mix to a thorough consistency. Use a steel trowel or scrapper to apply the grout to the surface, ensuring that any excess grout is scrapped of the surface. Allow 24 hours of curing time, after which the excess grout is removed with the final metal-bond stage. Re-grout, if necessary, before moving onto the polishing stage.

Sealing:

Once the grinding & polishing is over, clean the surface thoroughly and apply a protective sealer from the MATEX sealer range. The sealer coat is highly recommended to make the terrazzo surface more resistant against staining to water, chemicals, oil, grease and solvent. Periodic re-sealing is necessary to maintain the surface against traffic worn effect.

Standards:

- ASTM D695, ASTM D790, ASTM D638, ASTM D2240, ASTM D4060, ASTM D570, ASTM D696, ASTM E96-95
- DIN 1048

TECHNICAL PROPERTIES	
Appearance	Pasty
Density	2.00 ± 0.03 kg/lit
Solid Volume	100%
Application Temperature	10°C to 40°C
Pot Life @25°C @35°C	1 hour 30 minutes
Tack free time @20°C @30°C	4-5 hours 3-4 hours
Initial Hardness @25°C @30°C	16-24 hours 16 hours
Adhesion Strength	2.4 Cohesive failure Of concrete
Compressive Strength (ASTM D695)	>70 N/mm ²
Flexural Strength (ASTM D790)	>35 N/mm ²

DECOFLOOR TERRAZO EP

Tensile Strength (ASTM D638)	16 N/mm ²
Shore D Hardness (ASTM D2240)	80
Abrasion Resistant (ASTM D4060 CS-17, 100 CYCLES)	40 mg
Water absorption (ASTM D570)	NIL
Impact Resistance	Pass
Thermal coefficient of linear expansion (ASTM D 696)	25 x 10 ⁻⁶
Fungus and Bacterial Growth	NIL
Water Permeability (DIN 1048)	NIL
Water Vapor Transmission (ASTM E96-95)	NIL
Flash Point	Non-flammable
VOC	15 g/l

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Packaging:

30 kg kit divided as:

Component A	:	3.66 kg
Component B	:	1.44 kg
Component C	:	
Filler		10.80 kg
Coarse		14.10 kg

Coverage:

Approximately 20 Kg/m² at 10 mm thickness will produce an 8.0 mm finish after grinding and polishing.

Storage:

Store in dry covered place in the original closed bags.

Shelf Life:

DECOFLOOR TERRAZO EP can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Cleaning:

Clean up the mixing & application equipment immediately after use with ARMOSOLVENT.

Recommendations:

- Allow the concrete flooring to cure for 28 days before applying the DECOFLOOR TERRAZO EP. The concrete substrate moisture level should not exceed 5%.
- Do not apply if ambient temperature is less than 10°C or more than 35°C, or if rain is expected during application.
- Running the grinder unnecessarily fast will lead to unsatisfactory results.
- When polishing a floor, keep an eye on the finish you're producing as you go. If you see faint scratches starting to appear, remove them immediately, rather than hoping that the problem will cure itself, as it will only continue to manifest as you polish up the floor.
- The minimum recommended thickness of application is 8 mm before grinding. After grinding and polishing, the thickness will drop to 6 mm.
- Do not apply on area subject to negative hydrostatic pressure
- UV radiation may cause color change on certain colors especially dark ones. Not recommended for external applications.
- All expansion joints in the existing substrate should be extended in the applied DECOFLOOR TERRAZO EP flooring.

Health and Safety:

- Always used appropriate PPE, including gloves, safety goggles and a barrier cream to avoid contact with skin and eyes.
- Should contact with skin and eyes occur, wash immediately with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.
- Avoid inhalation and ensure adequate ventilation or suitable respiratory equipment if working in confined spaces.
- Do not expose product to fire or naked flames under any circumstances.
- Always refer to the product Safety Datasheet for full health, safety and handling recommendations.

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