

CIKOtile BS40



High strength, semi dry cement based thick bedding mortar

Description

CIKOtile BS40 is single component cement based high strength bedding mortar screed designed for thick horizontal applications ranging from 30mm up to 100 mm followed by a slurry bond layer to fix stones, granites, marbles or any other type of tiles.

CIKOtile BS40 is a factory blended powder consisting of cement, adhesion enhancing polymers, graded aggregates, water retention agent, rheology modifier that requires addition of water and proper mixing at site for usage.

Properties & Advantages

- Single component product, requiring only addition of water and proper mixing for usage at site.
- Good bond strength when used in conjunction with CIKObond SBR.
- High compressive strength suitable for heavy duty and heavy traffic areas.
- Resistant to water, heat and freeze thaw cycles.
- Excellent adhesion over primed surface and to slurry coat in the wet stage during application.

Application area

CIKOtile BS40 is a high quality and high strength bedding mortar screed used for interior and exterior applications to fix and install precast concrete pavers, interlocking stones, natural stones, granite, marble and other type of tiles in both residential/commercial buildings and architectural floorings such as roads, pavements, parking lots, roundabouts, crossings, pedestrian crossings, etc.

Applicable Standards

CIKOtile BS40 complies with minimum performance requirements of:

- BS 7533-12 table-3
- Qatar Construction Specifications (QCS)

Physical Properties

Form	Powder
Colour	Grey
W/P	0.08-0.09
Fresh Density (g/cm ³)	2.25 ± 0.05 (depending on degree of tamping)
Compressive Strength BS EN 1015-11	≥ 20 N/mm ² (1 day)
	≥ 40 N/mm ² (7 days)
	≥ 50 N/mm ² (28 days)
Flexural Strength BS EN 1015-11	≥ 3 N/mm ² (1 days)
	≥ 5 N/mm ² (7 days)
	≥ 7 N/mm ² (28 days)
Pull off Adhesion Strength BS EN 1015-12 @ 28 days (high degree of tamping and bonded with SBR)	≥ 2 N/mm ²
Volume change BS EN 445	≤ 0.1%
Modulus of Elasticity ASTM C469 @ 28 days	20 ± 2 *10 ³ N/mm ²
Maximum size of aggregate	6 mm

Coverage

Each bag of 25 kg CIKOtile BS40 yields to 12-12.5 L and provides coverage for bed applications as follows.

30mm thick solid bed	0.4 to 0.41 m ²
100mm thick solid bed	0.12 to 0.125 m ²

Coverage rate may vary depending on substrate conditions, degree of tamping and finish. Bedding thickness can be maintained from 30 mm to 100 mm.

Application instructions

Surface Preparation

Substrate 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 or chemical degreaser. Curing compounds and sealers, if present, must be removed by mechanical means.

When substrate is of cement bounded materials or compacted gravel /aggregate, it is mandatory to have a sound, stable and high degree of compaction. On site evaluation and trials are recommended prior to actual work commencement.

Priming

Proper bonding strength of the bedding screed is achieved by applying CIKObond SBR at a rate of 0.1 L/m² up to 0.15 L/m² by spray or roller and allows becoming tacky prior to the application of CIKOtile BS40.

For higher bonding requirements, apply a slurry mix of CIKObond SBR with OPC at a ratio of 1:2 respectively and allow becoming tacky prior to bedding CIKOtile BS40.

Mixing

Pour 2 up to 2.25 litres of clean water in a wide clean container of minimum capacity 40 L or in the drum of a high shear mortar mixer, dispense the powder gradually while mixing using heavy duty adjustable speed drill-paddle mixer assembly or whilst the mortar shear mixer is on power mode. Mix for 3 to 5 minutes at high speed until achieving a homogeneous with semi-dry and plastic consistency having no slump.

Note: In hot weather application, use chilled water to extend the workability and in create the drying time of the mixed material.

Application method

Spread the properly mixed material over the tacky primed surface to a uniform thickness. Level the applied surface using a steel trowel or aluminium bar as required and tamp it before setting.

Prepare a slurry mix consisting of OPC and CIKObond SBR at a ratio 2:1 by weight respectively using a drill mixer to achieve pourable lump free slurry.

Pour the properly mixed slurry over the levelled bedding screed whilst its surface is wet at a thickness of 2 to 3 mm. At the same time brush

the back side of the tile/stone with the slurry then immediately install it. Tap the installed tile properly using a rubber hammer to adjust the level and ensure proper compaction, bonding and full surface contact. Protect the tiled surface from foot traffic for at least 24 hours and minimum 7 days for vehicular traffic or as required to attain the required strength.

When CIKOtile BS40 is applied as finishing screed, the surface must be finished using a steel trowel followed by spraying a thin coat of curing agent among CIKOcure wide range of products to avoid shrinkage and eliminate surface dry.

Recommendations

- Include expansion joints where possible along with kerbs, pavements, around manholes, drains and along the lines of slope changes.
- For thicknesses above 50 mm spread CIKOtile BS40 in small areas at time not to exceed 5 to 6 m².
- The joint width of installed tiles has to be 5 to 15 mm gap.
- Grouting the joint using CIKOstone Flogrout on same day of application is recommended to form monolithic flooring. (Fresh on Fresh technique).
- When applied at thicknesses between 100 and 150 mm, it is recommended to 20 to 25 % by weight aggregate/gravel (size 5-8 mm).
- Ambient temperatures during application must be between 5°C and 40°C.
- Substrate and tile surface temperature must be between 5°C and 40°C.
- The Mixed mortar initial temperature shall not exceed 35 °C.

Packaging

CIKOtile BS40 is available in 25kg and 50kg moisture resistant bags.

Shelf life

CIKOtile BS40 has a shelf life of 12 months in un-opened bags and if stored in accordance with CIKO instructions.

Storage

CIKOtile BS40 should be stored under enclosed shaded area at temperatures between 5 °C and 45°C.

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 comes in contact with 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