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CE
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EN1504-3

Isocrete
floor screeds

Isocrete HB

Product sheet

Product Description

Isocrete HB is a lightweight, high build, low shrinkage repair mortar with unique polymers and fibre reinforcement for trowel applied vertical and overhead repairs requiring high performance.

Primary Applications

- Overhead and vertical repairs
- Resurfacing of damaged or deteriorated concrete
- Hand applied repairs
- Spray applied repairs
- For exterior and interior use

Features / Benefits

- Single-component for easy mixing and handling
- Spray able by the wet spray method
- Contains no chloride admixtures
- Single application thickness of 100 mm in vertical, horizontal and 60 mm in overhead situations
- Contains an integral corrosion inhibitor
- Low permeability helps protect rebar from corrosion
- High bond strength provides excellent adhesion
- Easily over coated with specialist membranes to provide further protection and aesthetic quality.

Appearance

Isocrete HB is a free-flowing powder designed to be mixed with water. After mixing and placing, the colour may appear darker than the surrounding concrete. While this colour will lighten as the **Isocrete HB** cures and dries out, the repair may always appear darker than the surrounding concrete.

Packaging

Isocrete HB is packaged in 25 kg moisture resistant bags. Yield: 18 L, 25 kg bag when mixed with 3.75 L of water.

Coverage

Approximately 18.0 - 18.3 Litres / 25 kg bag (approximately 1.8 m^2 at 10 mm thickness).

Shelf Life

1 year in original, unopened packaging.

Specifications / Compliances

Suitable for repair methods 3.1, 3.2, 3.3, 7.1 and 7.2 as defined by BS EN 1504-3.

Technical Information

Performance tests	Result	Requirement
		Non Structural Class R2
Mixing water	16,0%	--
Determination of compressive strength, EN 12190:1999	31,2 N/mm^2	≥ 15 MPa
Chloride ion content, EN 1015-17:2000	0,01%	≤ 0,05 %
Measurement of bond strength by pull-off, EN 1542:1999	1,7 MPa	≥ 0,8 MPa
Determination of retraction and expansion, EN 12617-4:2002, Method controlled movements	Shrinkage: 1,7 MPa Expansion: 1,7 MPa	≥ 0,8 MPa
Freeze-thaw cycling with icing salt immersion, EN 13687-1:2002	1,5 MPa	Bond strength after 50 cycles ≥ 0,8 MPa

Directions for Use

Surface Preparation: The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. De-laminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable mechanical or very high pressure water-blasting techniques. Saw cut the edges of the repair to a depth of at least 5 mm to provide a square edge. Break out the complete repair area to a minimum depth of 5 mm up to the sawn edge.

Priming: Clean and prime exposed steel with a suitable zinc rich primer. Concrete should be primed with a spray or brush coat of **Isocrete Primer**. The primer coat of **Isocrete Primer** must be allowed to thoroughly dry prior to the application of **Isocrete HB**. Alternatively, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of **Isocrete HB**. The repair must be made before the scrub coat dries out. **Isocrete HB** is highly polymer modified and as a result concrete surfaces do not generally require a primer.

Mixing: Isocrete HB should be mechanically mixed using a forced action pan mixer or in a clean drum using a drill and paddle. Free-fall mixers must not be used. For normal applications, use between 3.75 - 4.25 litres of clean water per 25 kg bag depending upon the desired consistency. For part bags this equates to 6 - 7 volumes of powder to one volume of water. Typically, for high build applications use 4.0 litres of clean water per bag which gives water: powder ratio of 16%. Normal mixing time depends on the type of mixer used, 2 - 3 minutes is average. Mix so as to entrain as little air as possible. Use without delay.

Placement: Isocrete HB can be applied by float or trowel as a render, resulting in application thicknesses of 100 mm, even in soffit situations. If necessary, support with shuttering to allow for compaction if working to reveals.
The application thickness achievable is dependent upon the substrate and care must be taken to ensure that an initial thickness of mortar, typically 5-10 mm, is well placed and adhered before building up to larger depths. For repairs which require multi-layer applications score the surface of the placed mortar before it reaches final set. Final profiling of a high quality is easily achieved with a steel float.

Finishing: Finish the repair material to the desired texture. Do not add additional water to the surface during the finishing operation.

Curing & Sealing: Isocrete HB is a cement-based repair mortar. In common with all cementitious materials, it must be cured immediately after finishing in accordance with good concrete practice. The use of KURESEAL, sprayed on to the surface of the finished mortar in a continuous film, is recommended. A low pressure atomising sprayer is essential for applying the KURESEAL. Any excessive run-off on verticals or drips on soffits should be removed by brush before they harden. If a curing compound is not desired, wet cure for a minimum. Large areas should be cured as trowelling progresses (0.5 m^2 at a time) without waiting for completion of the entire area.

Clean Up

Clean tools and equipment with water before the material hardens.

Precautions / Limitations

- Refer to recommendations provided in BS EN 1504-10
- Avoid application in direct sun and/or strong wind and/or rain
- Do not add water over recommended dosage
- Apply only to sound, prepared substrates
- Do not add additional water during the surface finishing as this will cause discoloration and cracking
- Protect freshly applied material from freezing.

Any suggested practices or installation specifications for the composite floor or wall system (as opposed to individual product performance specifications) included in this communication (or any other) from Flowcrete UK Ltd constitute potential options only and do not constitute nor replace professional advice in such regard. Flowcrete UK Ltd recommends any customer seek independent advice from a qualified consultant prior to reaching any decision on design, installation or otherwise.

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