



Technical Data Sheet

INDUCRET®-BIS-5/40


Art.-No. 5 50039

**Repair mortar for voids from 5 – 40 mm depth,
 maximum grain: 2 mm**

Properties:

INDUCRET-BIS-5/40 is an anti-sag repair mortar for voids from 5 – 40 mm depth with the following properties:

- a cementitious repair mortar for vertical and horizontal surfaces
- ready to use after mixing with water
- water impermeable
- water vapour permeable
- resistant to frost and de-icing salts
- impairs the passage of CO₂
- high resistance to carbonation

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SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold	
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DIN EN 1504-3 INDUCRET-BIS-5/40 Concrete replacement for structural and non-structural repair to EN 1504-3 ZA:1a	
Compressive strength:	R4
Chloride ion content:	≤ 0.05 %
Adhesive bond:	≥ 2.0 N/mm ²
Restrained shrinkage/expansion:	NPD
Resistance to temperature change, part 1:	≥ 2.0 N/mm ²
Capillary water absorption:	≤ 0.5 kg x m ² x h ^{0.5}
Carbonation resistance:	passed
E-modulus:	≥ 20 GPa
Reaction to fire:	Euroclass A1
Durability:	NPD

NPD = „No Performance Determined“

INDUCRET-BIS-5/40 is a system component and is only to be used in combination with INDUCRET-BIS-0/2.

Areas of application:

INDUCRET-BIS-5/40 is used as an anti-sag re-profiling mortar for vertical, horizontal and overhead areas for voids up to 40 mm.

Technical Data:

Colour:	cement grey
Basis:	cement
Components:	1
Particle size:	up to 2 mm
Bulk density:	1.6 kg/dm ³
Wet density:	2.1 kg/dm ³
Working life:	approx. 60 minutes at +20 °C
Overcoat after:	min. 1 day
Application temp:	min. approx. +5 °C, max. approx. +30 °C
Compressive strength:	24 hours approx. 14 N/mm ² 7 days approx. 50 N/mm ² 28 days approx. 60 N/mm ²
Flexural strength:	24 hours approx. 4 N/mm ² 7 days approx. 8 N/mm ² 28 days approx. 9 N/mm ²

Cleaning:

Thoroughly clean tools with water after use.

Packaging:

25 kg bag

Storage:

12 months when kept in the original unopened packaging under dry and cool conditions above +10 °C.

Substrate preparation:

Before application of INDUCRET-BIS-5/40 exposed steel reinforcement must be treated with INDUCRET-BIS-0/2 corrosion protection according to the Technical Data Sheet. Cementitious surfaces must be solid with a good key and be load-bearing, free from cement laitance, loose particles as well as adhesion inhibiting substances (oil, grease, rubber marks, paint residues or other contamination). Surface preparation is necessary such as e.g. grit blasting, shot blasting, high pressure jet washing (500–2000 bar), scabbling or planing. The largest aggregate must be visible after completion of these measures. The substrate is to be thoroughly pre-wetted but during application of INDUCRET-BIS-0/2 the relevant substrate may however only be matt damp.

Minimum concrete substrate age: 28 days.

Average surface tensile strength: min. 1.5 N/mm²

Product preparation:

1. Production of the repair mortar:

- INDUCRET-BIS-5/40 25.0 kg
- Water approx. 3.5 – 3.75 litres

Fill a mixing vessel with up to 80% of the above mentioned water quantity. Add the above quantity of INDUCRET-BIS-5/40 under constant mixing with a suitable stirrer (approx. 300 rpm). Mix thoroughly for approx. 3 – 5 minutes to a lump free mortar. Add the remaining water and mix for a further 2 minutes. Use a compulsory mixer for preparing large quantities. Only mix as much material as can be used within the stated working life.

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Application tools:

Hand trowel, wood float, steel trowel, hand tools for smoothing, rubbing board.

Application by hand:

INDUCRET-BIS-5/40 may only be used in combination with the bonding agent INDUCRET-BIS-0/2.

The maximum exposed area applied must not exceed 1.0 m².

Bonding agent:

Brush apply INDUCRET-BIS-0/2 with a hard broom onto the prepared matt damp substrate ensuring complete coverage and pore filling.

Subsequent application of INDUCRET-BIS-5/40 must be wet in wet with the bonding agent. Spread INDUCRET-BIS-5/40 onto the fresh bonding agent to the required thickness with a suitable tool. Finish by compacting the mortar and smoothing.

Wet spray application process:

When using wet spraying techniques it is not necessary to use a mineral-based bonding coat. The application of two coats of INDUCRET-BIS-0/2 corrosion inhibitor is to be carried out at least 72 hours before the wet spray application of INDUCRET-BIS-5/40. When installing INDUCRET-BIS-5/40, the surface should only be matt damp. Reprofiling using wet spray techniques is carried out once the material has been mixed in a compulsory mixer with conveyor pump and when using a MAWO nozzle. To ensure an even spray pattern an industrial compressor (min. 4 m³ air / 4 – 5 bar pressure) is mandatory.

Without compulsory mixer:

Pump system: High Comp Power

Pump unit: XP 120

Water demand: approx. 190 – 200 litres/hour

Nozzle: MAWO nozzle 35/12 mm

Max hose length: 30 m

Control nozzle distance: 0.5 – 1.0 m

PFT pump system:

Multi Mix compulsory mixer

Conveyor pump N2FU400 / screw feed D8-1.5

Reprofiling nozzle 35/12 mm

(Reprofiling spray tool)

Max hose length: 30 m

Control nozzle distance: 0.5 – 1.0 m

Inotec pump system:

Inomix compulsory mixer ZM80 Jet Mix

Inobeam F21 light / screw feed D8-1.5

Mortar hose 25 mm diameter

Reprofiling nozzle 35/12 mm

(Reprofiling spray tool)

Max hose length: 30 m

Control nozzle distance: 0.5 – 1.0 m

Material application:

Through introduction of compressed air at the spray nozzle, the material should exit the nozzle in a uniform circular pattern. During the first spray coat application, blow holes, honeycombs, voids behind the rebar, irregularities in the wall, etc, should be filled and evened out. The second spray coat should be used to build up desired material thickness, which can then be finished with proper smoothing methods.

Material consumption (finished mix):

Approx. 1.8 kg/m²/mm thickness,

approx. 1.0 litre/ mix = 2.13 kg

Curing and protection:

Repeatedly dampen and protect the surface for at least one day after application of INDUCRET-BIS-5/40 using suitable measures (e.g. covering with polythene) against rapid drying out resulting e.g. from direct sunlight, draughts and/or high temperature fluctuations.

Mortar surfaces must be prevented from early water evaporation by keeping them damp e.g. by water mist spray with water or protecting with Jute sheeting.

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Health & Safety

INDUCRET-BIS-5/40 contains cement that forms an alkaline reaction with moisture. Therefore contact with the eyes and skin is to be avoided and mortar splashes are to be immediately and thoroughly washed off with plenty of water. Seek medical attention from an eye specialist when contact with eyes occurs. Store INDUCRET-BIS-5/40 out of the reach of children.

Important advice:

- Prior to commencing any concrete restoration measures, the actual condition is generally to be assessed by a specialist and/or Structural Engineer. The test record is to be made available to the applicator before starting the renovation work.
- Protect areas not to be treated from the effects of INDUCRET-BIS-5/40.
- Cover with suitable sheeting to protect against rain.
- Building substrates and ambient temperatures below +20 °C delay setting times and above +20 °C accelerate setting times.
- Use only mains or drinking water when mixing INDUCRET-BIS-5/40. Do not add additional water or powder to material which has begun to stiffen in an attempt to restore original consistency. This can result in inadequate bonding.
- Application to larger areas can be carried out up to max. 20 mm by hand with a trowel in one layer. For greater thicknesses, we recommend building up in multiple layers. If sprayed, thicknesses up to 40 mm are possible in one layer.
- Applications that are not clearly explained in this technical data sheet may only be carried out after consultation with and written confirmation from the Technical Services Department of SCHOMBURG ICS GmbH.
- Observe the "Additional technical contractual terms and regulations for civil engineering works" from the ZTVING.

Please observe a valid EU safety data sheet.

GISCODE: ZP 1