



## Technical Data Sheet

# ASOCRET-FM40


**Repair mortar for voids from 5 – 40 mm;  
 largest grain size: 2 mm**

**Art.-No. 2 05557**

### Properties:

ASOCRET-FM40 is a non-slump repair mortar for voids from 5 – 40 mm with the following properties:

- Cement-based repair mortar for vertical and horizontal areas
- Trowel or spray application
- Impermeable to water
- Water vapour permeable
- Resistant to frost and de-icing salts
- Impairs CO<sub>2</sub> penetration
- High resistance to carbonation

	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold 10 205557	
DIN EN 1504-3 <b>ASOCRET-FM40</b> 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 <sup>2</sup>
Restrained shrinkage/expansion: NPD	
Resistance to temperature change, part 1:	≥ 2,0 N/mm <sup>2</sup>
Capillary water absorption:	≤ 0,5 kg x m <sup>2</sup> x h <sup>-1/2</sup>
Carbonation resistance:	passed
E-modulus:	≥ 20 GPa
Reaction to fire:	Euroclass A1
Durability:	NPD

NPD = „No Performance Determined“

ASOCRET-FM40 is a system component and only for use in combination with ASOCRET-KS/HB.

### Areas of application:

ASOCRET-FM40 is used for horizontal and vertical areas and those overhead, as a non-slump re-profiling mortar for voids up to a depth of 40 mm. Used as a levelling mortar in swimming pools and on pool surrounds, as well as for shaping pool edge details for subsequent application of bonded waterproof membranes or the installation of tiles.

### Technical Data:

Colour:	cement grey
Basis:	cement
Grain size:	up to 2 mm
Bulk density:	1.6 kg/dm <sup>3</sup>
Green density:	2.1 kg/dm <sup>3</sup>
Working life:	approx. 60 mins at +20 °C
Overcoat after:	min. 1 day
Application temp.:	+5 °C to +30 °C
Compressive strength:	24 hrs approx. 14 N/mm <sup>2</sup> 7 days approx. 50 N/mm <sup>2</sup> 28 days approx. 60 N/mm <sup>2</sup>
Flexural strength:	24 hrs approx. 4 N/mm <sup>2</sup> 7 days approx. 8 N/mm <sup>2</sup> 28 days approx. 9 N/mm <sup>2</sup>

Covering with bonded waterproof membranes/  
 tiles:  
 Cleaning:

approx. 24 hrs  
 thoroughly clean tools after  
 use with water

Packaging:  
 Storage:

25 kg bag  
 12 months when stored  
 dry in the original unopened  
 packaging. Use opened  
 packaging promptly.

### Substrate preparation:

Before applying ASOCRET-FM40, exposed reinforcing steel must be treated with the corrosion inhibitor ASOCRET-KS/HB according to the Technical Data Sheet. Cement-based areas must be solid, finely textured and load-bearing, free from cement laitance, loose parts as well as adhesion inhibiting substances (oil, grease, rubber marks, paint residues or other contamination). Preparation of the substrate is necessary such as e.g. grit blasting, shot blasting, high pressure jet washing (500–2000 bar), scabbling or planing. The prepared surface must have an open-pored structure. Adequately pre-wet the treated substrate 24 and then 2 hours before application of ASOCRET-FM40. At the time of mortar application, the surface must be matt-damp.

Minimum concrete substrate age: 28 days  
 Mean surface tensile adhesion strength:  
 min. 1.5 N/mm<sup>2</sup>

### Product preparation:

Production of the repair mortar:

- ASOCRET-FM40 25.0 kg
- Water approx. 3.5 – 3.75 litres

Material consumption (final mix):  
 Approx. 1.8 kg/m<sup>2</sup>/mm thickness  
 Approx. 1.0 l/mix = 2.13 kg  
 Fill up to 80% of the above water quantity into a clean mixing bucket. Continuously add the above quantity of ASOCRET-FM40 whilst continuously stirring with a suitable drill mixer (approx. 300 rpm). Thoroughly mix the material for 3 minutes to a lump free mortar. Then

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add the remaining water and mix for a further 2 minutes. Allow to stand for 2 minutes then re-mix briefly. When large quantities are prepared, use a compulsory mixer. Only mix as much material as can be used within the times given above.

## Application tools:

Hand mixing trowel, wooden board, steel trowel, hand held lath, rubbing board

## Application by hand:

ASOCRET-FM40 may only be used in combination with the bonding coat ASOCRET-KS/HB. The maximum exposed area applied must not exceed 1.0 m<sup>2</sup>.

## Bonding coat:

Cover the prepared matt-damp substrate with ASOCRET-KS/HB by working deep into the pores with a hard broom.

Subsequent application of the repair mortar ASOCRET-FM40 is to be carried out into the wet bonding coat.

Apply and spread ASOCRET-FM40 onto the wet bonding coat to the required thickness using a suitable tool. Subsequently compact and smoothen the mortar.

## Application by wet-spraying method:

When applying using wet spraying methods, the use of a mineral-based bonding coat can be omitted. Apply 2 layers of the corrosion inhibitor ASOCRET-KS/HB a minimum of 72 hours before installing ASOCRET-FM40 by wet spray methods. The prepared surface must have an open-pored structure. Adequately pre-wet the treated substrate 24 and then 2 hours before application of ASOCRET-FM40. At the time of mortar application, the surface must be matt-damp. Re-profiling by wet spray methods follows mixing the material in a compulsory mixer with a suitable feed pump and using a MAWU nozzle. To achieve an even spray pattern a high performance construction compressor (min. 4 m<sup>3</sup> air/ 4 – 5 bar service pressure) is essential.

Without compulsory mixer:

Pump system: High Comp Power

Pump unit: XP 120

Water demand: approx. 190 – 200 l/hr

Nozzle: MAWU nozzle 35/12 mm

Max. Pipe length: 30 m

Control nozzle displacement: 0.5 – 1.0 m

PFT pump system:

Multi Mix compulsory mixer

Feed pump N2FU4000 / screw conveyor D8-1.5

Reprofiling nozzle 35/12 mm

(reprofiling spray gun)

Max. Pipe length: 30 m

Control nozzle displacement: 0.5 – 1.0 m

Inotec pump system:

Inomix compulsory mixer ZM80 Jet Mix

Inobeam F21 light / screw conveyor D8-1.5

Mortar pressure pipe 25 mm diameter

Reprofiling nozzle 35/12 mm

(reprofiling spray gun)

Max. Pipe length: 30 m

Control nozzle displacement: 0.5 – 1.0 m

Material application:

Through the addition of air at the spray nozzle, the mortar is sprayed in a circular manner in order to achieve a clean spray pattern. The first pass of the spray head is to fill holes and cavities as well as to fill out voids behind the reinforcing steel and to even out irregularities in the substrate. The second spray pass is to achieve the required thickness and to finish with a suitable smoothing tool.

## Post-treatment:

Following the application of ASOCRET-FM40, it is fundamentally necessary to protect the mortar surfaces from drying out too quickly using suitable measures. Keep damp for at least 3–5 days using mist spray nozzles or wet jute sacking as required also covered with polythene sheets. The polythene sheets must be fastened to the area treated, so that air exchange cannot take place. If the area in question is exposed to

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direct sunlight, draughts, large temperature fluctuations and/or low humidity then after care treatment must be intensified. If it is intended to apply a mineral-based waterproof slurry, then this can be used as an alternative after care treatment after approx. 24 hours.

## Health & Safety:

ASOCRET-FM40 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 thoroughly washed off immediately with plenty of water. On contact with the eyes, seek medical attention from an eye specialist. Please store ASOCRET-FM40 out of the reach of children.

## Important advice:

- Prior to carrying out concrete repair works the actual condition should be inspected by an expert or Structural Engineer. The inspection report is to be given to the applicator prior to commencement of repair work.
- Protect surfaces not being treated with ASOCRET-FM40.
- Cover with suitable sheeting to protect from rain.
- Marginal temperature: +5 °C to +30 °C.
- When preparing ASOCRET-FM40 only use mains or drinking water. Material that has started to stiffen may not be diluted with water or more powder added. There is a risk of an inadequate bond.
- 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 GmbH & Co. KG.
- Observe the "Additional technical contractual terms and regulations" from the ZTV-ING.

Please observe a valid EU Health & Safety data sheet.

GISCODE: ZP1