

## Reprofiling self-leveling mortar composition for repairing concrete structures

### 1. Product characteristics

Single-component dry self-leveling composition (mortar mixture). Meets the requirements of class R4 according to EN 1504-3.

- designed for concrete repair (principle 3, 4 and 7 method 3.1, 3.2, 3.3, 4.4, 7.1 and 7.2 according to EN 1504-3)
- mixed with water only, good workability, highly liquefied
- perfect adhesion to concrete base and reinforcement
- permanently water-resistant
- very good mechanical properties
- frost-resistant
- compensated in volume

### 2. Use

**MONOMIX SCC** is intended especially for general repairs of large horizontal surfaces and concreting of horizontal supporting or leveling layers on bridges and during industrial floors implementations. It can be used for producing thin-wall precast as well.

### 3. Physical and mechanical parameters

#### Requirements / results according to EN 1504-3 class R4

	Testing method	Requirements	Results
Compressive strength (MPa)	EN 12190	≥ 45	> 45
Chloride Ion Content	EN 1015-7	≤ 0.05 %	< 0.01 %
Adhesive Bond (MPa)	EN 1542	≥ 2.0	> 2.0
Carbonation Resistance	EN 13295	$d_k \leq$ control concrete	complies
Thermal Compatibility, Part 1 Freezing and Thawing (MPa)	EN 13687-1	Adhesion after test	> 2.0
		≥ 2.0	
Elastic Modulus (GPa)	EN 13412	≥ 20	> 20

#### Physical and mechanical parameters

<b>MONOMIX SCC</b>		<b>f</b>	<b>r</b>	<b>c</b>
Color		Non-standard grey		
Bulk density of fresh mortar (kg/m <sup>3</sup> )		2 150 ± 50		
Tensile bending strength (MPa)	7 days	> 6.0	> 6.2	> 6.3
	28 days	> 8.5	> 8.6	> 8.8
Compressive strength (MPa)	7 days	> 31	> 33	> 35
	28 days	> 46	> 49	> 50
Combustibility		class A1		

### 4. Test certificates

Meets the requirements of EN 1504-3, TP ŘSD Sec. 31 and TP SSBK III.

The product is certified according to Act No. 22/1997 Coll. and Regulation (EU) No 305/2011 of the European Parliament and of the Council (CPR).

Continuous independent production quality control is provided by AZL 1687 LABBET®.

Supervision of Quality Management Systems, Environmental Relations and OSH is carried out by Certification Body No. 3029

### 5. Instruction for preparation and application

During the processing of dry mortar mixes **MONOCRETE SCC** it is generally necessary to comply with the principles contained in the relevant technological process **BETOSAN** for repair of reinforced concrete structures (TP No.1/06).

Base. Any incoherent, loose, weatherworn or otherwise visibly damaged concrete shall be completely removed from the surface of the repaired base. Corroded reinforcement shall be carefully released and cleaned of any corrosive products. Before application of repair material, humidification of the base surface must be properly and

continually performed for at least 120 minutes. The properly humidified concrete shall be dully dump, and not covered with dump shining water film.

Preparation of repair mortar. The mortar is prepared by simple mixing with water. During stirring it is necessary to use a low-speed mixer with forced circulation. The recommended mixing ratio is specified in the following table:

Indication/type of mortar	Max. size of fillers	Recommended mixing ratio		Thickness of applied layer in single working area	
		Dry component (kg)	Thickness of applied layer in single working area	min. (mm)	max. (mm)
<b>MONOMIX SCC f</b> fine	1 mm	25	3.20 ÷ 3.45	15	35
<b>MONOMIX SCC r</b> medium	4 mm	25	3.05 ÷ 3.20	35	50
<b>MONOMIX SCC c</b> coarse	8 mm	25	2.90 ÷ 3.10	50	≈200*

**Note:** Recommended layer thickness, according to specific situation it can be higher.

Workability of the product is 50 - 60 minutes under 20 °C.

Neither temperature of base nor temperature of ambient air shall be below + 5 °C and above + 30 °C.

The mix is applied by classical processes (placement on horizontal bases or pouring into a formwork) complemented by formwork or poker vibrations. After initial setting standard processes (smoothing by a wooden or steel trowel or polystyrene finisher) are used for surfacing. No additional water shall be worked up into the surface.

Surface finalization. After initial setting of the last layer smoothing by a dry polyurethane finisher is used for surfacing. Wet surfacing is not allowed.

Surface treatment. Repaired surfaces shall be properly treated immediately after completion to avoid especially direct exposure to sun, wind effect and other factors accelerating undesirable evaporation of the batch water. Use of the treatment agents **DENSOCURE W** and **DENSOCURE R** proved well.

## 6. Specific consumption

Specific consumption of dry mortar is 1.8 kg/m<sup>2</sup> at 1 mm of layer thickness.

## 7. Packing and storage

The product is packed into 25 kg PE-lined paper bags. **MONOMIX SCC** must be efficiently protected during transportation and storage against moisture. Shelf life in undamaged packing is 6 months.

After the expiration of min. shelf life, which is stated on the packaging, ingredients are not fully effective at reducing chromium VI below 2 ppm.

## 8. Health protection at work

Handling the **MONOMIX SCC** dry rehabilitation mortar does not require any extraordinary hygienic precautions. The product contains alkalis and therefore any contamination of mainly eyes or mucous membrane must be prevented. Health and labor safety rules applicable to work with cement or lime mortars are to be adhered to.

Issued MSDS meets the requirements of EC-Regulation 1907/2006, Article 31.

Because the product meets the criteria for classification as hazardous, it is necessary to provide the recipient or carriers with MSDS.

In countries where regulation REACH (par. 33.1): EU regulation on chemicals and their safe use (REACH: EC 1907/2006) is valid, professional users and distributors must be provided with following information automatically and without request:

*This product is subject to Regulation (EC) No. 1907/2006 (REACH). It does not contain any substances that could be released from product under normal or reasonably foreseeable conditions of use. Therefore, there are no registration requirements for substances in articles within the meaning of. Article 7.1 of the Regulation.*

*Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from candidate list published by the European Chemicals Agency in concentrations above 0.1% (w / w).*


## 9. Waste disposal

During disposal of contaminated packages or clearing debris from product, it is necessary to follow the Act No. 185/2001 Coll. on waste, as amended.

## 10. Important notice

All information mentioned above, especially advice for processing and application of our products is based on our knowledge from the development of chemical products and on years of experience with applications in practice at standard conditions, and proper storage and use. Due to the differing conditions during processing, high count of products, varying nature and modifications of base and other external influences, the procedure based on the information provided or on other written or oral recommendations, may not always ensure satisfactory working results. BETOSAN s.r.o. assumes no liability for provided advice or recommendation. The applicator must prove, that he submitted complete information on time and in writing which is necessary for a proper detailed assessment by BETOSAN s.r.o. The applicator must test the suitability of the products for the intended application. Proprietary rights of third parties, above all, must be taken into account. All received are orders subject to our current "General sales and delivery conditions ". Please always make sure that you follow the most recent issue of the Technical Data Sheet. It is available, along with other information, at our Technical Department or at [www.betosan.cz](http://www.betosan.cz)

## 11. CE marking

 1301	
<b>BETOSAN s.r.o.</b> Na Dolinách 28, 147 00 Prague 4	
07	
3-9/072013	
EN 1504-3:2005	
<b>MONOMIX SCC</b> Product designed to repair concrete with static function	
Compressive strength	class R4
Chloride Ion Content	< 0.05%
Adhesive Bond	> 2.0 MPa
Carbonation Resistance	Complies
Thermal Compatibility, Part 1 Freeze-thaw	> 2.0 MPa
Elastic Modulus	> 20 GPa
Dangerous substances	meets 5.4
Reaction to fire	European class A1

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3

ADMIXTURES, SUBSTITUTE FOR CONCRETE

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