

## DENSOCRETE 555



Two-component fine spread for concrete surface sealing and finalization.

### 1. Product characteristics

Two-component composition consisting of dry inorganic based component and modified styrene-acrylate dispersion. Meets the requirements of EN 1504-3.

- designed for concrete repair (principle 3 and 3.1 according to EN 1504-3)
- supplied in specified rate of components, good workability
- excellent adhesion to concrete base
- permanently water-resistant
- applied manually or by spraying
- good mechanical properties
- frost-resistant

### 2. Use

**DENSOCRETE 555** is a two-component polymer-cement mortar composition for surface repair of new monolithic reinforced concrete structures. Meets the requirements of class R3 according to EN 1504-3.

**DENSOCRETE 555** mortar composition is suitable for sealing damaged surfaces of reinforced concrete structures and also for surface unification and sealing of concrete and reinforced concrete structures repaired with **MONOCRETE** repair mortars. **DENSOCRETE 555** can be coated with any type of secondary protection in dependence on exposure of the repaired structure.

### 3. Physical and mechanical parameters

Requirements / results according to EN 1504-3 class R3

	Testing method	R3 Requirements	Results
Compressive strength (MPa)	EN 12190	>25	>25
Chloride Ion Content	EN 1015-7	< 0.05 %	< 0.01 %
Adhesive Bond (MPa)	EN 1542	>1.5	> 1.5
Carbonation Resistance	EN 13295	$d_k \leq$ control concrete	complies
Bound contraction-expansion (MPa)	EN 12617-4	Adhesion after test $\geq 1.5$	> 1.5

#### Physical and mechanical parameters

Colour	Non-standard grey	
Bulk density of dry component(kg/m <sup>3</sup> )	1 520 ± 40	
Bulk density of fresh spread (kg/m <sup>3</sup> )	1 800 ± 40	
Tensile bending strength (MPa)	28 days	> 8.5
Compressive strength (MPa)	28 days	> 38
Frost resistance	> T150	
Adhesion to base (MPa)	> 2.0	

### 4. Test certificates

Initial tests types according to EN 1504-3, Protocol No. 1301-CPD-0295 issued by TSÚS Bratislava. Supervision of the quality system, EMS and OHSAS is carried out by Notified Body No. 1020.

### 5. Instruction for preparation and application

During the processing of dry mortar mixes **DENSOCRETE 555** it is generally necessary to comply with the principles contained in the relevant technological process **BETOSAN** for repair of reinforced concrete structures (TP n.1/06).

**Base.** Any incoherent, loose, weatherworn or otherwise visibly damaged concrete shall be completely removed from the repaired concrete surface before application. The concrete surface cannot be contaminated by substances negatively effecting adhesion to the base (fats, greases, oils, etc.). Tensile strength of concrete surface layers shall be 1.5 MPa at least. The base must be perfectly moistened before the application of spread. Extremely absorbent substrates can be cured with **DENSOCURE 222** penetration agent.

**Preparation of the spread DENSOCRETE 555** is prepared in a container of sufficient size by mixing both components well (preferably by electrically driven propeller agitator) in ratio: 25 kg of dry component, 4 litres of liquid component and 2 litres of water. A low-speed mixer with forced circulation is necessary for mixing. Consistency can be adjusted by adding up to 10% water, if needed.

	Dry component (kg)	Liquid component (litres)	Water (litres)	Thickness of applied layer (mm)	
<b>DENSOCRETE 555</b>	25	4	2	min.1	max.3

**Workability.** Workability of the prepared spread is 60 minutes under 20 °C and relative humidity 50-70 %. The prepared composition shall be suitably protected against desiccation.

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

**Spread application.** It is necessary to thoroughly moisten the base (see above) before application of **DENSOCRETE 555** spread is applied mechanically or manually. Manual application means fining off, preferably with a notched trowel. Spread is applied one layer, whose thickness should be between 1 and 3 mm. Surfaces coated with the spread coating shall be efficiently protected against direct sunshine and wind.

**Surface finalization** is performed right after the spread application with steel finisher or a semi-hard bristle brush.

**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. It is necessary to properly moisten the repaired places several times a day at least first 3 days after the repair. Use of a **DENSOCURE W** treatment agent proved well.

**Tools shall be cleaned** with water right after completion. Hardened spread can be removed only mechanically.

## 6. Specific consumption

Specific consumption of the spread is: 1.8÷2.0 kg/m<sup>2</sup> on 1 mm of layer thickness.

## 7. Packing and storage

The dry component is packed into 25 kg paper bags with PE spraying or PE pails of 5 kg. The liquid component is packed into PE pails with net content 4 litres or 0.8 kg. During transport and storage the **DENSOCRETE 555** dry component shall be effectively protected against moisture. The liquid component shall be protected against freezing. The shelf life of the product in original intact packing is 6 months for the dry component and 6 months for the liquid component.

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

No extraordinary sanitary measures are necessary while working with the two-component adhesive bridge **DENSOCRETE 555**. It is necessary to avoid particularly contamination of eyes and mucous membranes because the product (dry component) contains alkaline components.

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 orders are 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

<b>CE</b> 1301	
<b>BETOSAN s.r.o.</b> Na Dolinách 28, 147 00 Prague 4 07	
1301-CPD-0295	
EN 1504-3:2005	
<b>DENSOCRETE 555</b> Product designed to repair concrete with static function	
Compressive strength	class R3
Chloride Ion Content	< 0.05%
Adhesive Bond	> 1.5 MPa
Carbonation Resistance	complies
Bound contraction- expansion	> 1.5 MPa
Elastic Modulus	> 15 GPa
Dangerous substances	meets 5.4
Reaction to fire	Europe class A1

Issued 12.2.2014

Technical Data Sheet No. 2-33

sheet  
33