

DENSOCRETE 111



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CONCRETE REPAIR

Anticorrosive protection / adhesive bridge

1. Product characteristics

Two-component material consisting of dry inorganically based component and water-soluble modified acrylate dispersion. Meets the requirements of EN 1504-7.

- supplied in specified ratio of components
- good workability, applied manually or by spraying
- perfect adhesion to concrete base and reinforcement
- permanently water-resistant
- provides active re-alkalization of reinforcement surrounding

2. Use

DENSOCRETE 111 is a two-component polymer cement mix intended for protection of reinforcement (principle No. 11, method 11.1 according to EN 1504-9) and creation of adhesive layers between the concrete base and repair materials, especially **MONOCRETE PPE** and **PPE TH** series, in cases of repairs of damaged concrete and reinforced concrete surfaces.

3. Physical and mechanical parameters

Requirements / results according to EN 1504-7

	Testing method	Requirements	Results
Anticorrosive protection	EN 15183	painted area without corrosion and swelling, corrosion of the plate edge < 1 mm	complies

Physical and mechanical parameters

Color	Non-standard grey
Bulk density of dry component (kg/m ³)	1 620 ± 40
Content of water-soluble chlorides (%)	< 0.01
Adhesion to base (MPa)	> 2.5

4. Test certificates

Meets the requirements of EN 1504-7.

The product is certified according to Act no. 22/1997 Coll. and the Regulation (EU) no. 305/2011 (CPR).

Continuous independent control of production quality ensures the AZL 1687 LABBET®.

Supervision of quality management system, relation to the environment system and occupational health and safety system perform the certification body no. 3029.

5. Instruction for preparation and application

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 affecting adhesion to the base (fats, greases, oils, etc.). Tensile strength of concrete surface layers shall be 1.5 MPa at least. Corroded reinforcement shall be carefully released and cleaned of any corrosive products (min. degree Sa1½ according to ČSN EN ISO 12944-4). The base must be perfectly moistened before the application of the adhesive bridge. If the base cannot be moistened, it is necessary to apply priming coat.

Preparation of adhesive bridge has two steps. **The first step is the preparation of the priming solution, which shall be applied to reduce absorability of the base in cases it can't be properly moistened.**

Priming solution is prepared by mixing 0.5 liters of the liquid component with water in the ratio ranging between 1 : 5 and 1 : 8 in dependence on porosity and base quality (dense quality concrete requests higher dilution!). The adhesive bridge DENSOCRETE 111 itself is prepared in sufficiently voluminous vessel by proper mixing of 25kg of dry component and 7.5 kg (7.5 liters) of liquid component. Most suitable is to use an electrically driven propeller agitator. Consistency can be adjusted by adding up to 10% water, if needed.

In case of smaller size packaging the stated quantities are 10 x less.

Workability. Workability of the prepared adhesive bridge is 90 minutes under 20 °C and relative humidity 50-70 %. The prepared composition shall be efficiently protected against desiccation.

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

Adhesion bridge application. Before application of the adhesive bridge **DENSOCRETE 111** it is necessary to thoroughly moisten the base (see above). If it is not practicable and base is excessively dry or absorbent, it is

required for the surface to be coated with priming coat. The surface is primed by solution prepared by the above-mentioned process i.e. by diluting the liquid component with water in the ratio 1:5 up to 1:8 in dependence on porosity and the base quality. In cases of extraordinary absorbent and dry bases the priming can be repeated (two or three times) with technological break of at least 120 minutes between each coat layer. Priming coat shouldn't create a glossy film on the concrete surface. Application of the adhesive bridge itself should be performed on a primed base with a technological break from 120 minutes to 24 hours after the priming. If **DENSOCRETE 111** is used as corrosion protection of reinforcement, the second layer shall be applied with a technological break ranging from 1 hour to 6 hours after the first one but directly before application of a repair mortar so that the mortar is applied into the moistened bridge. The process is the same if it is used as an adhesive bridge. **DENSOCRETE 111** is applied on the primed surface of the repaired construction so that thickness of the applied layer ranges approximately between 0.5 and 1.0 mm. The repair mortar or freshly laid concrete is applied, without delay, into the applied adhesive bridge.

Open time. After application on the construction the so-called open time of the adhesive bridge is max. 30 minutes under 20°C and relative humidity 50 - 70 %. It is necessary to take into account that the possible application period of the mortar or new concrete is reduced with increasing temperature and reducing relative humidity.

6. Specific consumption

Specific consumption of the adhesive bridge amounts to $0.6 \div 1.2$ kg/m² in dependence on surface roughness and absorbability.

7. Packing and storage

The dry component is supplied in 25 kg paper bags with PE spraying or PE pails of 2.5 kg. The liquid component is supplied in PE cans with net content of 8 liters or 0.8 liters. During transport and storage the **DENSOCRETE 111** dry mix shall be efficiently protected against moisture. The liquid component shall be protected against freezing. The shelf life of the product in original undamaged 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 111**. 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 (para. 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 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



11. CE marking

 1301	
BETOSAN s.r.o. Na Dolinách 28, 147 00 Prague 4	
07	
2-1/072013	
EN 1504-7:2006	
DENSOCRETE 111 Anticorrosive protection /adhesive bridge	
Anticorrosive protection	complies
Glass Transition Temperature	NPD
Skid resistance	NPD

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