



## Fine spread coating for repair of concrete surface with XYPEX ADMIX C-1000 admixture

### 1. Product characteristics

Single-component dry spread coating containing redispersable polymers with sealing admixture XYPEX ADMIX C-1000. Meets the requirements EN 1504-3.

- mixed with water only, good workability
- permanently seals the concrete base due to secondary crystallization in the pore system of a water-bearing concrete
- highly chemically resistant, seals the concrete surface against oil products
- frost-resistant
- perfect adhesion to base
- good mechanical properties
- compensated in volume
- as required by Act No. 258/2000 Coll. and Ministry of Health Decree No. 409/2005 Coll. is eligible for direct contact with drinking water

### 2. Use

**DENSOFIX XP** a single-component dry mortar mix intended especially for repairs and sealing of damaged and repaired concrete and reinforced concrete surfaces. Spread coating **DENSOFIX XP** can be coated with any type of secondary protection in dependence on exposure of the repaired structure. It creates an insulating layer on the surface of a concrete structure, which is impermeable to water, oil, organic solvents, oil products etc.

### 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%                      | ≤ 0.05%  |
| Adhesive Bond (MPa)   | EN 1542        | ≥ 1.5                        | ≥ 1.5    |
| Carbonation Resistance                                      | EN 13295       | $d_k \geq$ control concrete  | complies |
| Elastic Modulus (GPa)                                       | EN 13415       | ≥ 15                         | ≥ 15     |
| Thermal Compatibility, part 1: Freeze-thaw (MPa)            | EN 13687-1     | adhesion after test<br>≥ 1.5 | ≥ 1.5    |
| Capillary Absorption ( $\text{kg m}^{-2} \text{h}^{-0.5}$ ) | EN 13057       | ≤ 0.5                        | ≤ 0.5    |

#### Physical and mechanical parameters

|   |  |       |
|---|--|-------|
| Color   | Non-standard yellow-grey   |       |
| Bulk density of fresh spread coating (kg/m <sup>2</sup> ) | 2 070 ± 40   |       |
| Tensile bending strength (MPa)                            | 7 days   | > 3.0 |
|   | 28 days  | > 5.5 |
| Compressive strength (MPa)                                | 7 days   | > 16  |
|   | 28 days  | > 25  |
| Dynamic E-module (GPa)                                    | < 25   |       |
| Thermal expansion coefficient (K <sup>-1</sup> )          | 12.5 ± 0.4x10 <sup>-6</sup>  |       |
| Frost resistance  | > T100   |       |
| Filtration coefficient <b>k</b> (ms <sup>-1</sup> )       | < 2.5x10 <sup>-12</sup>  |       |
| Penetration of water under pressure                       | penetration into the body with the spread coating < penetration into the body without the spread coating |       |

### 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). Con-



tinuous independent production quality control is provided by AZL 1687 LABBET®. Supervision of quality management, environmental and OSH systems is performed by Certification Body No. 3029.

## 5. Instruction for preparation and application

During the processing of dry mortar mixes **DENSOFIX XP** 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 or weatherworn particles and dust shall be completely removed from the surface of the repaired base. The concrete surface cannot be contaminated by substances negatively affecting adhesion to the base (fats, greases, oils, etc.). Rinsing with pressure water is the best method for necessary complete removal of any dust from the entire repaired surface before application.

**Preparation of spread coating.** The spread coating is prepared by simple mixing with water. The recommended mixing ratio is as follows:

|                    | Dry component (kg) | Water (liters) | Thickness of applied layer (mm) |        |
|--------------------|--------------------|----------------|---------------------------------|--------|
| <b>DENSOFIX XP</b> | 25                 | 5.00 ÷ 5.75    | min. 2                          | max. 4 |

**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.

**DENSOFIX XP spread coating** is applied either mechanically or manually. Manual application means finning off. The spread coating is applied in one layer whose thickness should not exceed value specified in the above table. Surfaces coated with the spread coating shall be efficiently protected against direct sunshine and wind.

**Surface finalization.** After initial setting of the spread coating smoothing by a dry polyurethane or polystyrene finisher is used for surfacing.

**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 following treatment agents **DENSOCURE W** and **DENSOCURE R** proved well. It is desirable to properly moisten the repaired places several times a day for min. 3 days following the repair.

## 6. Specific consumption

Specific consumption of dry mortar is 1.6 to 1.7 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. **DENSOFIX XP** 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 **DENSOFIX XP** 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. Respiration of the mortar dust components and contamination of skin must be avoided by efficient means. It is not allowed to eat, drink or smoke. After work contaminated skin should be washed with water and soap and treated with reparative cream.

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. Pro-



# 4

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

|   |   |
|---|---|
| <br>1301                     |   |
| <b>BETOSAN s.r.o.</b><br>Na Dolinách 28, 147 00 Prague 4  |   |
| 13  |   |
| 4-9/072013  |   |
| EN 1504-3: 2005   |   |
| <b>DENSOFIX XP</b><br>Fine spread coating for repair of concrete surface<br>with XYPEX ADMIX C-1000 admixture |   |
| Compressive strength  | ≥ 25 MPa                                    |
| Chloride Ion Content  | ≤ 0.05%                                     |
| Adhesive Bond   | ≥ 1.5                                       |
| Carbonation Resistance  | $d_k \leq$ control concrete (MC(0.45))      |
| Elastic Modulus   | ≥ 15 GPa                                    |
| Skid Resistance   | NPD   |
| Thermal Compatibility, part 1: Freeze-thaw  | ≥ 1.5 MPa                                   |
| Capillary Absorption  | ≤ 0.05 kg m <sup>-2</sup> h <sup>-0.5</sup> |
| Reaction to Fire  | Class A1                                    |
| Dangerous Substances  | meets 5.4                                   |

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WATERPROOFING

BETOSAN

BETOSAN s.r.o., Na Dolinách 28, 147 00 Praha, Czech Republic  
 Business and technical office Nová cesta 291/40, 140 00 Prague 4, Czech Republic  
 Tel./fax.:+420 241 431 212, tel.:+420 241 431 215  
 E-mail: [paha@betosan.cz](mailto:paha@betosan.cz), [www.betosan.cz](http://www.betosan.cz)