



MONOCRETE XP TH rapid

Rapidly hardening hydroinsulation mix with XYPEX ADMIX C-1000 admixture.

1. Product Characteristics

One-component thixotropic non-slump fine-grained rapidly setting concrete mix containing sealing admixture XYPEX ADMIX C-1000.

- Extremely rapid hardening,
- does not contain chlorides, fully compatible with reinforced concrete,
- permanently water-resistant due to secondary crystallisation in porous system of liquefied concrete permanently seals the concrete base,
- high chemical resistance,
- seals concrete base against petroleum products,
- freeze-thaw resistant,
- good adhesion to concrete substrate,
- fit for thickness from 15 to 300 mm.

2. Use

MONOCRETE XP TH rapid is rapidly hardening prefabricated mix intended especially for localized or full surface repairs of concrete or masonry structures, where rapid hardening is required. Mix features very short setting time and extremely rapid strength increase. The mix can be loaded with light traffic after 6 hours, material can be fully loaded after 24 hours. It creates sealing membrane resistant against water, oils, organic solvents, oil products, etc. on the surface of the concrete or masonry structures.

3. Physical and mechanical parameters

Colour	non-standard grey	
Bulk density (kg/m ³)	1,600 ± 40	
Tensile bending strength (MPa)	6 hr 24 hr 14 days 28 days	>2,50 >5,00 >7,50 >9,00
Compressive strength (MPa)	6 hr 24 hr 14 days 28 days	>10,0 >25,0 >50,0 >55,0
Static E-modulus (GPa)	<28	
Thermal expansion coefficient (K ⁻¹)	11,0 ± 0,5·10 ⁻⁶	
Freeze-thaw resistance	>T100	
Coefficient of filtration K (ms ⁻¹)	2,5·10 ⁻¹²	
De-icing chemicals resistance according to CSN 73 1326 method A	>75	
Adhesion to substrate (MPa)	>1,5	

Meets requirements of norm EN 1504 - 3:2005

4. Test certificates

The product is certified according to Act no. 22/1997 Coll. and Governmental Decree no. 163/2002 Coll. Continuous independent quality control is provided by accredited testing laboratory no. 095/2002, Horský s.r.o.. The authorised entity no. 204 provides quality system supervision.

5. Instruction for preparation and application

Base: Dirt and incoherent, loose or otherwise visibly damaged concrete shall be completely removed from the base before application. Corroded reinforcement, if any, shall be cleaned of any incoherent corrosive products. Tensile strength of surface layers of the concrete base should be optimally on the level of 1.5 MPa. Before application, humidification of the surface of the base shall be properly and continually performed for at least 120 minutes. Before casting, the surface shall be dully damp, and not covered with shining water film. Rapidly leaking areas of the structure need to be drained using drainage hoses and after full surface application of the material close the drainage openings with rapidly setting hydroinsulation putty **WATERIFIX rapid**.

Preparation of mix: The mix is one-component and is mixed with water only. Pan concrete mixer can be used for preparation of the mix or in case of preparation of small amount, the mix can be mixed with a propeller mixer driven by an appropriate electric drill. Add 1,95 ÷ 2,25 l of water to 15 kg of mix (1 pail). This mix can be applied by the dry spraying. **Regular gravity mixers cannot be used for mixing of this material due to very short setting time. When preparing larger volume of the material it is necessary take into account that workability of the mix is 10 to 15 minutes at 20°C.**

Workability of the mix is 10 - 15 minutes at 20° C. Workability time adequately shortens at elevated temperatures. Neither **temperature of concrete substrate** nor temperature of ambient air shall be below + 1° C and above + 35° C. Mix has limited capacity to cure in freezing condition.

The mix is applied by two methods - classical rendering or so called dry spraying. Manual application can be done by setting or spreading. First layer (connective) needs to be applied in such a way to prevent creation of any cavities (behind rebar etc.). After first application of the mortar it is recommended to spread the mortar into pores and holes in the substrate. It is recommended to use flat brush or sawtooth trowel. Proper workmanship is basic condition for quality adhesion. When applying local repairs it is necessary to take good care to remove any voids or pores from edge of the local repair. Repair mix should be always applied from the area of deepest damage in such a way that the final layer will be continuous.

Finalization of the surface: After the initial setting standard processes (smoothing by a float, steel trowel or polystyrene finisher) are used for surfacing. No additional water shall be worked up into the surface.

Surface treatment: Concrete surface shall be protected against direct sunshine and wind immediately after completion. Intensive treatment shall be carried out 3 to 6 hours following the application. Optimal treatment is to cover the surface with permanently moistened geotextiles.

6. Specific consumption

Specific consumption of dry mortar is 1,8 kg/m² at 1 mm of layer thickness.

7. Packing and storage

The product is packed into 15 kg PE pails. **MONOCRETE XP TH rapid** must be efficiently protected during transportation and storage against moisture. Shelf life in undamaged packing is 3 months.

8. Health protection during application

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

The product is subject to TPD 131-05/BET specification. Data presented in this document are based on the knowledge and information available to the manufacturer at the time of its issue.

This technical specification is superseded by the edition of its amended or updated version.

In case of doubt please contact the manufacturer.

The manufacturer is not responsible for any damages caused by improper use, incorrect application or non-adherence to prescribed technological procedure.

9. 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.langeproon.ee or www.betosan.cz.

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