



## Water proofing and anti-radon slurry coating fit for direct contact with potable water

### 1. Product characteristics

Two-component permanently elastic water proofing material consisting of dry component on inorganic basis and water-soluble modified polymer dispersion. Meets the requirements of EN 14891 and complies with EN 1504-2.

- supplied in specified rate of components, has very good workability
- can be applied on damp surfaces, has perfect adhesion to base
- permanently resistant against high water pressure
- highly elastic; facilitates bridging of any, even movable, crack
- resistant against combined impact of frost and spreading salt
- resistant against permanent exposure to acid solutions up to pH 1.5 and alkaline solutions up to pH 13.0
- creates efficient barrier against radon penetration
- as required by Act No. 258/2000 Coll. and Ministry of Health Decree No. 409/2005 Coll. is eligible for direct contact with potable water

### 2. Use

**WATERFIN PV** is a two-component permanently elastic polymer cement sealing suspension intended for water proofing of various concrete and reinforced concrete construction elements. It is used for surface sealing of concrete constructions in hydro-technical and water works and as sealing layer under tile covering or another floor finishes in bathrooms, pools and water tanks. Further finds use as a sealing layer on coherent lime plaster, masonry made of porous concrete panels, or the bricks, plasterboard and other tolerable surfaces. It is also suitable as a safety waterproofing under ceramic tiles or other walkable layer in bathrooms, swimming pools, water tanks and other structures. It has good adhesion to metal bases, which are protected by its alkalinity against start-up of corrosive processes. It can be used as permanently efficient anti-radon protection. *The coating with WATERFIN PV cannot be considered as aesthetic surfacing.*

### 3. Physical and mechanical parameters

#### Requirements / results according to EN 14891

		Testing method	Requirements	Results
Adhesion to base (MPa)	initial	EN 14891	> 0.5	> 1.5
	after contact with water	EN 14891	> 0.5	> 1.2
	after aging in heat	EN 14891	> 0.5	> 1.5
	after de-icing cycles	EN 14891	> 0.5	> 1.1
	after contact with limewater	EN 14891	> 0.5	> 0.9
Water tightness		EN 14891	no penetration	without leakage
Crack-bridging ability under normal conditions		EN 14891	> 0.75	> 1 mm

#### Physical and mechanical parameters

Color - dry component - liquid component	non-standard grey / white white
Color of coating **)	grey / white
Minimum film-generating temperature of liquid component (°C)	> 1
Tensile strength (MPa)	> 1,5
Yield ability (%)	> 30
Vapor resistance $s_{D,H_2O}$ (m)	< 4
Water tightness (under both negative and positive effect of water pressure)	> 8 bars (80 m water column)
Coefficient of radon diffusion $D$ (m <sup>2</sup> /s) *)	$9.4 \times 10^{-12} \pm 0.5 \times 10^{-12}$

\*) Comparable value as e.g. vapor resistance of foil made of high-density polyethylene ( $5 \cdot 10^{-12}$ ).

\*\*) In case of larger surfaces color unevenness can occur in dependence on absorbance of the base.

#### 4. Test certificates

Meets the requirements of EN 14891.

The Státní zdravotní ústav (state medical institute) performed the expert assessment that the product meets the hygiene requirements for permanent contact with drinking water according to law no. 258/2000 Coll. and Ministry of Health decree no. 409/2005 Coll.

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 performs 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 base surface. The concrete surface cannot be contaminated by substances negatively effecting adhesion to the base (fats, greases, oils, etc.). The concrete surface can not at all be covered with dust. Cavens and other surface damages, if any, shall be filled with the repair mortar **MONOCRETE PPE TH**. Humidification of the base surface shall 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.

To ensure good adhesion to very dry substrates, the substrate should be primed with **DENSOCRETE 222** diluted in the ratio approximately 1:5 in dependence on the absorbance of the base. In case of exterior application, the underlying layers shall be freeze-thaw resistant.

**Preparation of waterproofing coating.** **WATERFIN PV** is supplied in specified rate of dry and liquid components which amounts to 2.8 : 1 weight ratio. The preparation itself is as follows: the appropriate quantity of the dry component is gradually added to the constantly stirred liquid component until mushy consistency fit for application is reached. Depending on used application method or use up to 10% of water can be added. The mixture shall be perfectly homogenized in case of additional thinning of the coating.

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

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

**Water proofing coating is applied** by a brush or roller coating in two or three layers at least. Layers should be applied crosswise (brush strokes would be superposed). The second and third layer can be applied after setting of the previous one i.e. approximately after 24 hours. The coating exposed to pressure water shall be at least 1.5 mm thick. Minimal thickness 1 mm can be used in other cases. In corner, edge or base dilatation areas, it is necessary to insert sealing strip **WATERFIN TP** into wet coating.

**Coating is fully mature** after 7 days at a temperature construction +20 °C and a relative air humidity of 50÷70%. Low temperatures, or high relative humidity, significantly extend the maturation period. At a temperature below +5 °C, or relative humidity above 90%, maturation practically stops.

#### 6. Specific consumption

Specific consumption of the water proofing coating amounts to 2,2 ÷ 2,7 kg/m<sup>2</sup> at 1 mm layer thickness, in dependence on the surface roughness and absorbance. This corresponds to 1.6 ÷ 2.0 kg/m<sup>2</sup> of dry component and 0.6 ÷ 0.7 kg/m<sup>2</sup> of liquid component.

#### 7. Packing and storage

The dry component is packed into 25 kg paper bags with PE spraying, grey variant also into 12.5 kg PE pails. The liquid component is packed into PE pails with net content of 9 or 4.5 liters net. During transport and storage the **WATERFIN PV** dry mix shall be effectively protected against moisture. The liquid component shall be protected against freezing. The storage life of the product in original intact packing is 12 months for the dry component and 12 month 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 **WATERFIN PV**. 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 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		
13		
4-1/072013		
EN 14891:2017		
<b>WATERFIN PV</b> Water proofing and anti-radon coating		
Adhesion to base (MPa)	initial	> 1.5
	after contact with water	> 1.2
	after aging in heat	> 1.5
	after de-icing cycles	> 1.1
	after contact with limewater	> 0.9
Water tightness		without leakage
Crack-bridging ability under normal conditions		> 1 mm

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