BETOFIX SW UV TOP

CE

Two-component protective coating on the basis of polyurethane resins

1. Product characteristics

Two-component protective coating on the basis of specially formulated polyurethane resins. Meets the requirements of EN 1504-2.

- supplied in specified rate of particular components; no weighting in-situ is needed
- has high UV radiation resistance
- has a high water vapor and carbon dioxide penetration resistance
- highly elastic with increased toughness
- generated coating film is permanently water-resistant and resistant to alkaline environment
- permanently protects concrete against aggressive effects of acid components of atmosphere and operating media
- tolerates higher substrate and ambient atmosphere moistness
- provides the surface layers of concrete with mechanical and chemical resistance to effects of aggressive media (oils, inorganic salts etc.)

2. Use

BETOFIX SW UV TOP is two-component coating composition on the basis of specially formulated polyurethane resins, which is intended especially for protective coating of concrete and reinforced concrete structures exposed to enhanced corrosive load of both components of ambient air and operating media effecting the structure. In combination with **BETOLIT KP W** penetration coating the composition is intended for application on young concrete with higher residual moister content. **BETOFIX SW** is designed especially for such operating conditions where a high water vapor permeability resistance (water vapor impermeability) is required. It is also used as a UV protection for epoxy coating **BETOFIX S** and **SW**.
BETOFIX SW UV TOP has a long-term resistance to effects of organic solvents, permanent resistance to petrol, diesel, inorganic oxidizing agents, salt solutions, dilute organic acids and alkaline solutions.

3. Physical and mechanical parameters

Requirements / results according to EN 1504-2

Property	Testing method	Declared value or class	Results
Water penetration rate in liquid stage (kg/m^{2}h$^{-0,5}$)	EN 1062-3	w < 0.1	< 0.1
Adhesive Bond (MPa)	EN 1542	> 1.5	> 2.5
Carbon dioxide permeability (m)	EN 1062-6	S_D> 50 m	290 m
Water vapor permeability (m)	EN ISO 7783-1	5 m≤ S_D ≤ 50 m	10 m

Physical and mechanical parameters

Color of composition		RAL shades
Density under 20 ºC (kg/m^3)		1 220±25
Viscosity under 20 ºC (mPas)		2 800±350
Workability of composition		< 2 hours
Drying-out*) under 20 ºC	stage 1 stage 5	1 - 2 hours 4 - 6 hours
Adhesion to base (after hardening for 72 hours under 20 ºC)		> 2.0 (MPa)

*) According to EN ISO 9117-5 (673057) Paints and varnishes - Drying tests Part 5: Modified Bandowov-Wolff´s method

4. Test certificates

Meets the requirements of EN 1504-2, annex ZA and TP ŘSD Sec. 31.
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). Continuous 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

Base. Any incoherent, loose or weatherworn particles shall be removed from the surface of the base. The surface cannot be contaminated by substances negatively effecting adhesion of the coat to the base (fats, greases, oils, etc.). Tensile strength of surface layers of the base shall be 1.5MPa at least. Corroded reinforcement and visibly damaged concrete shall be properly repaired. When the composition is applied, the new concrete shall be 14 days old at least and moisture of the base should not exceed 4%. If epoxy coating shall be the substrate (e.g. **BETOFIX S,** resp. **SW**), the base must be clean, all the separating dirt must be removed and if the coating is old it is desirable to roughen appropriately.
This composition is prepared by proper mixing of components A and B in specified rate. The mixing rate is the following:

	Component **A** (weight parts)	Component **B** (weight parts)
BETOFIX SW UV TOP	4	1

Components A and B are mixed in a sufficiently voluminous vessel by an electrically driven propeller agitator.
Workability. Workability of prepared composition ranges about 60÷90 minutes under 20 °C. The prepared composition shall be efficiently protected against desiccation.
Neither temperature of the base nor temperature of ambient air shall be below +5 ºC and above +30 ºC.
Application of the coat. The first step is penetration of the base by the penetration and anchoring coat **BETOLIT KP W.** Penetration is applied preferably by a roller or, possibly, a brush in quantity amounting to 100 - 150 g/m² in dependence on absorbance of the base. In case of larger surfaces it is practical to apply **BETOLIT KP W** by spraying using some convenient airless devices.
After 24 hours **BETOFIX SW UV TOP** is applied by a roller or, possibly, by a brush in quantity amounting to approximately 200 g/m2 per one layer. If **BETOFIX SW UV TOP** is applied by spraying, it is practical to adjust its consistency by the diluent **PURCLEAN** in quantity up to 10%.
Open time. After mixing two components together so called open time of the penetration and the coating is max. 90 minutes under 20 ºC. Please notice that the open time significantly shortens with rising temperature.

6. Specific consumption

Spreading capacity (specific consumption) of **BETOFIX SW UV TOP** amounts to 0.2 ÷ 0.25 kg/m2 per one layer on dependence on roughness of the base. This spreading capacity ensures that the hardened film is approximately 120 - 150 µm thick.

7. Packaging and storage

BETOFIX SW UV TOP component A is packed in cans of 8 liters (9.6 kg net), component B in cans of 2 liters (2.2 kg net). The shelf life of the product in original intact packing is 24 months. During storage and handling it is necessary to take into account that it is the combustible matter of class I.

8. Health protection at work

Work with the two-component coating system **BETOFIX SW UV TOP** requires adequate sanitary measures usual for work with coating materials on the epoxy or polyurethane basis. First of all it is necessary to follow relevant provisions of Czech Standard ČSN 64 1301. The workplace shall be properly ventilated, workers shall have adequate personal protective equipment (mask, rubber gloves), and no eating, drinking or smoking is allowed while working.
In case of eye contamination it is necessary to rinse out eyes with clean water and immediately seek out medical aid. In case of accidental swallowing it is necessary to immediately cause vomiting and immediately seek out medical aid. In case of afflicted skin it is necessary to wash thoroughly the irritated skin with warmish water and soap and treat it by a suitable 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 (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.

11. CE marking

CE 1301	
BETOSAN s.r.o. Na Dolinách 28, 147 00 Prague 4	
07	
2-41/072013	
EN 1504-2:2004	
BETOFIX SW UV TOP Protective coating on polyurethane resin basis	
Water penetration rate in liquid stage	< 0.1 kg/m^{2}h$^{-0,5}$
Adhesive Bond	> 2.5 MPa
Carbon dioxide permeability	290 m
Water vapor permeability	10 m
Reaction to fire	F

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