

# **BILIZO**® **PUR 500**

## Liquid-Applied, Two Component Polyurethane Waterproofing Membrane

### Product Description

BILIZO® PUR 500 is a liquid-applied, solvent-free, hard-elastic, cold applied and cold curing, two component polyurethane membrane used for long-lasting waterproofing and protection. Cures by reaction (cross linking) of the two components.

### Advantages

- UV resistant.
- Certified for safe use in potable (drinking) water reservoirs.
- When applied forms seamless membrane without joints or leak possibilities.
- As it is pure polyurethane, it can continually contact with water.
- Maintains its mechanical properties over a temperature span of -40°C to +100°C.
- Remains elastic even at low (frost) temperature.
- Full surface adherence.
- The waterproofed surface can be walked on.
- Low cost.

### Consumption

2,0-2,4 kg/m<sup>2</sup> consumption should be applied in two or three layers.

Depending on the system solutions, the usage and amount may change.

### Uses

- Waterproofing of drinking water supply channels and pipes.
- Waterproofing of drinking water storage tanks and reservoirs.
- Odorless waterproofing of wet areas (under-tile) in bathrooms, swimming pools, kitchens, etc.
- Terraces and balconies,
- Coating and waterproofing of outdoor swimming pool and ornamental ponds.
- Used for waterproofing of surfaces in direct contact with potable (drinking) water.

### Packaging and Colors

BILIZO® PUR 500 A+B is supplied in off-white, light and dark blue in 18+3 kg or 6+1 kg pails.

### Technical Data

PROPERTIES	RESULTS	TEST METHOD
Composition	Polyurethane Resin + Hardener	
Mixing Ratio	A+B = 6:1 by weight	ASTM D 412
Resistance to Water Pressure	No Leak (1m water column, 24h)	ASTM D 412
Elongation at Break	>100%	ISO 9932:91
Adhesion to Concrete	>2,0 N/mm <sup>2</sup>	DIN EN 1928
Hardness (Shore A Scale)	70 + 5	ASTM D 903
Solids Content	100%	ASTM D 2240
Application Temperature	5°C to 35°C	Conditions: 20 °C, 50% RH
Pot-Life	30 minutes	
Tack Free Time	6 hours	
Light Pedestrian Traffic Time	12 hours	
Final Curing Time	7 days	
Density	1,48 gr/cm <sup>3</sup>	
Solid Content	100%	
Surface Temperature	Min +10°C      Max +40°C	
Ambient Temperature	Min +10°C      Max +40°C	
Relative Air Humidity	Max %70-80	
Dew Point	Pay attention to the dew point! Dew point must be at least +3 °C in order to reduce the risk of condensation and blooming in finished surface and uncured coating surface temperature.	
Chemical Properties	Good resistance against acidic and alkali solutions (10%), detergents, seawater, oils.	

Our technical advice for use, whether verbal, written or in tests, is given in good faith and reflect the current level of knowledge and experience with our products. When using our products, a detailed object-related and qualified inspection is required in each individual case in order to determine whether the product and /or application technology in question meets the specific requirements and purposes. We are liable only for our products being free from faults; correct application of our products therefore falls entirely within your scope of liability and responsibility. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery. Users are responsible for complying with local legislation and for obtaining any required approvals or authorizations. Values in this technical data sheet are given as examples and may not be regarded as specifications. For product specifications contact our R+D department. The new edition of the technical data sheet supersedes the previous technical information and renders it invalid. It is therefore necessary that you always have to hand the current code of practice.

## Application

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### Surface Preparation

The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed. **WARNING:** Do not wash the surface with water.

### Repair of Cracks and Joints

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results. Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the BILIZO® AQUA PRIMER and allow 2-3 hours to dry. Fill all prepared cracks with BILIZO-FLEX® PU 30 sealant. Then apply two layers of BILIZO® PUR 500, 200mm wide centered over all cracks.

Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1. Apply some BILIZO-FLEX® PU 30 Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of BILIZO® PUR 500, 200mm wide centered over and inside the joint. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with BILIZO-FLEX® PU 30 sealant. Allow 12 hours to cure.

### Priming

Prime surfaces, like concrete, cement screed, metal and ceramic tiles with enough BILIZO® AQUA PRIMER(min. 150-200 gr/m<sup>2</sup>). Allow 12 hours to cure.

### Mixing

Stir BILIZO® PUR 500 Component A well before using. Then add the BILIZO® PUR 500 Component B at the stipulated mixing ratio. BILIZO® PUR 500 Component A and Component B should be mixed by low speed mechanical stirrer, for about 3–5 min.

**ATTENTION:** The mixing of the components has to be effected very thoroughly, especially on the walls and bottom of the pail until the mixture becomes fully homogeneous.

### Waterproofing Membrane

Poor the entire BILIZO® PUR 500 A+B mixture, onto the primed and prepared surface and lay it out by roller or brush, until all surface is covered.

Please ensure consumption within the pot life of the product (~30min). Please do not leave the mixed BILIZO® PUR 500 A+B coating in the pail for long, because the exothermic reaction accelerates the curing and will shorten the pot-life. Directly after mixing poor the mixture on the surface on in smaller pails to minimize the exothermic reaction. After 12 hours - but not later than 36 hours –apply another layer of the BILIZO® PUR 500, by using roller or brush.

**RECOMMENDATION:** For best results, the temperature during application and cure should be between 5°C and 30°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

**WARNING:** After 36-48 hours the material is applied, air temperature should be above 8°C, it should not be rainy or snowy and should be applied with considering the possibility of raining.

### Storage

Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

## Safety Measures

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BILIZO® PUR 500 B contains isocyanates. Hands and eyes must be protected with gloves and protective glasses. Case of eye contact, rinse eyes with plenty of water for the material and consult a doctor immediately. Adequate

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ventilation is required during the application. NOTE: Keep out of reach of children. Please study the Safety Data sheet.

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