

Technical Data Sheet



AB-PUR® 550 WP

2-C-PU-WaterProofing

Description:

2-component modified polyurethane spray system
VOC < 500 g/l, softener free, application only with plural component spray equipment

Characteristics:

- fast reaction time
- high tensile strength
- high elongation at break
- high tear resistance
- high abrasion resistance
- does not deteriorate over time
- flexible at low temperatures
- accepts mastic asphalt
- resistant to root growth
- resistant to hydrolysis
- permeable to water vapour diffusion
- resistant to microbes

Application:

AB-PUR 550 WP is a spray elastomer that acts as a waterproofing and crack-bridging system that is used to protect against the ingress of water into concrete, timber, cement screed, fibre cement, bitumen and basically all above and below ground structures e.g. roofs, car parks, substructures, tunnels, terraces, balconies, galleries, parking garages, underground parking areas, water retaining structures, foundation walls, shafts and tanks etc. It also protects all the above from a vast range of chemicals and pollutants. **AB-PUR 550 WP** is an extremely durable and safe solution that is designed to protect a variety of structures within a construction environment. It also provides a uniform and seamless coating that has exceptional crack-bridging and waterproofing ability / properties. **AB-PUR 550 WP** has excellent adhesion properties, this important fact indicates that the system is, and shall maintain its integrity. This product is ideal for complex and detailed applications.

Consumption:

approx. 1 kg/m² per 1 mm layer thickness, minimum 1.5 mm (recommendation 2 mm).

Resistant to:

- salt water / sewage
- diluted acids and alkalis
- flexible at low temperatures, down to -40°C
- dry temperature max. 80°C
- ground and surface water
- mineral oils, diesel fuels
- resistant to root growth
- short-term +250°C (applied mastic asphalt)

Technical Data:

Mixing ratio A : B	100 : 100 by volume (1 : 1)
Density (23°C) component A / component B	approx. 1.04 g/cm ³ / approx. 1.09 g/cm ³
Volume solids	approx. 100 %
Viscosity (23°C)	approx. 1250 mPa·s ± 300 (component A) approx. 2150 mPa·s ± 300 (component B)
S _d - value	< 4 m
Tensile strength (DIN 53504)	> 10 N/mm ²
Elongation at break (DIN 53504)	> 300 %
Crack-bridging in acc. with ZTV-SIB - guidelines	IV _{T+V} = dynamic 0.4 mm / at -20°C
Crack open at 70°C for 1 week	min. 1 mm without tear at 2 mm thickness

Details for application:

Start of reaction	approx. 10 - 15 seconds
Substrate temperature	minimum 5°C up to maximum 40°C
Maximum relative humidity of air	90 % (dew point +3°C)
Curing time / foot traffic (5°C / 23°C / 30°C)	10 minutes / 5 minutes / 3 minutes
Duration between coats	10 minutes - 4 hours
Curing time (5°C / 23°C / 30°C)	36 hours / 24 hours / 24 hours
All above values are approximate and may be used as a guideline for specifications	

Packaging:

210 kg - barrel (component A)
200 kg - barrel (component B)

Colour:

grey (other colours are available on request)
- due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur -

Storage:

6 months, unopened in original drums under dry conditions and a temperature of 15 - 30°C.
At temperature < 15°C crystallisation is possible. Please contact us.

1. Surface preparation

Prior to the application the substrate must be prepared by mechanical means using qualified equipment e.g. Blastrac® shot blasting.

Minimum requirements:

- free of cement laitance, dust, oil, fat and other contaminants
- open textured, absorbent surface
- pull off strength min. 1.5 N/mm²
- concrete residual moisture max. 6 %

Depending on the condition of the substrate the surface must be made non-porous by the application of a primer and / or key coat with **AB-POX 010**, followed by a light sprinkle of clean, dry quartz sand. Once cured, carefully remove excess sand.

Hard asphalt (industrial mastic asphalt) must be prepared by shot blasting or abrasive grinding. Minimum 50 % of the filler aggregates must be exposed. The strength of the asphalt must meet the stated requirements.

Primer: **AB-PUR 375**

Mineral surfaced bitumen felt:

The surface must be cleaned carefully. Normally a primer is not required.

PVC: Primer **AB-PUR 095**

PU - foam: Primer **AB-PUR 350**

Metal: Remove areas that are oxidised, prime using **AB-MP 099**

See also "general preparation and application instructions" sheet.

2. Application

AB-PUR 550 WP must be applied using only a 2-component (heating facilitated) high or low pressure spray equipment. The use of gear pump machines are proven in the field of application. There are some piston pump machines available that can also do the application. Should an air spray diffuser be used, it must be equipped with a cold air dryer. If required stir component A using a barrel mixer (PPW 3720). Both components must be heated to 50°C and mixed in the exact ratio by a dynamic, static or injection system. Spray the material in a crosswise manner 2 - 4 coats (wet to wet). Whatever thickness is achieved on the horizontal areas, the same is applicable on the vertical surfaces. Prior to, and during the application, sheets controlling the coating thickness must be sprayed. The coating thickness can be monitored in the initial few minutes by cutting small samples off and measuring them. At a later stage tests will be done using an insertion needle. Should the coating not

be of an adequate thickness, the area may be sprayed again within 4 hours. Should the duration prove to be longer than 4 hours, the **adhesion primer AB-PUR 095** must be applied. Minor defects and faults can be repaired using **AB-PUR 566**. Overlap areas from the previous day's application must also be primed using **AB-PUR 095**, once allowed to dry for approx. 15 minutes, spray with **AB-PUR 550 WP** maximum duration 4 hours. The overlaps should be at least 15 cm. Prior to, during and after the application the temperature of the substrate must be at least +3°C above the current dew point temperature.

3. System components

The following figures are for ambient and surface temperatures of 15 - 23°C.

Primer on concrete:

AB-POX 010, clear

Consumption: approx. 0.4 - 0.5 kg/m², lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m²).

Key coat on concrete:

AB-POX 010 + quartz sand

Consumption: approx. 0.6 kg/m² resin plus quartz sand, lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m²).

Adhesion primer to the insulation:

AB-PUR 094, clear

Consumption: approx. 0.08 - 0.1 kg/m².

Metal primer:

AB-MP 099, green - yellow

Consumption: approx. 60 g/m².

Adhesion primer (lap to lap):

AB-PUR 095, violet - translucent

Consumption: approx. 40 - 80 g/m².

Waterproofing (minimum 2 mm):

AB-PUR 550 WP, grey

Consumption: approx. 2 - 4 kg/m².

Wear coat:

AB-PUR 350, pebble grey

Consumption: approx. 1.3 - 1.8 kg/m², broadcast with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 3 kg/m²) or clean, dry quartz sand 2 - 3 mm (approx. 1 kg/m²) for rolled asphalt.

UV - topcoat for roofs:

AB-PUR 751, pebble grey

Consumption: approx. 0.12 - 0.2 kg/m².

Topcoat (wear coat):

AB-POX 481, pebble grey

Consumption: approx. 0.7 - 1.0 kg/m².

UV - topcoat (wear coat):

AB-PUR 211, pebble grey

Consumption: 2 x approx. 0.4 - 0.5 kg/m².

Please consult us for a system.

4. Chemical resistance

- diluted acids and alkalis
- water / salt water / sewage approx. 4 % absorption without changing the characteristics
- diesel / petroleum / engine oil (it will swell, but with no change to its integrity or properties)
- 250°C hot mastic asphalt

5. Packaging

210 kg barrel (component A)

200 kg barrel (component B)

6. Health and safety

GISCODE: PU60

Avoid inhalation of the vapours and contact with skin. Wear suitable protective clothing, gloves, eye / face protection and suitable respiratory equipment. Adequate ventilation of the working area is recommended. After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. When using do not eat, drink, smoke and keep away from sources of ignition. For additional references to safety-hazard warnings, regulations regarding the transport and waste management please refer to the relevant Safety Data Sheet.

7. EU Directive ("Decopaint-RL"):

Acc. to the EU Directive 2004/42/EG the maximum allowed content of VOC (Product category All / j / type SB) is 500 g/l (Limit 2010) for the ready to use product. This product is in accordance with the EU Directive 2010.

AB-PUR 550 WP; 2.00/07.01.19. Before use, please check that this is the actual edition of the Technical Data Sheet. The information contained in this Technical Data Sheet is of a general nature and is provided in good faith and we accept no liability for errors or omissions. Because use and application of this product are out of our control and depend, concerning substrate, load and method of application, on the particularities of the individual case, our advice, verbal, written or based on tests, does not exempt the applicator from testing the suitability of the products for the intended use.

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