



TWO-COMPONENT, SOLVENT-FREE, HYBRID POLYUREA MEMBRANE APPLIED BY SPRAY USING A HIGH-PRESSURE, BI-MIXER TYPE PUMP TO FORM WATERPROOF COATINGS ON ROOFS AND BRIDGE DECKS DIRECTLY ON SITE.



## PRODUCT DESCRIPTION

Aquashield PU 2K Plus is a solvent-free paste consisting of selected epoxy polyurethane resins, special fine-graded aggregates and admixtures. Aquashield PU 2K Plus thixotropic consistency makes it easy to use for waterproofing even vertical and sloping surfaces. When completely dry Aquashield PU 2K Plus forms a waterproof plastic coating that is resistant to prolonged immersion in water, even when slightly acid or alkaline, and resistant to aggressive agents present in the soil.

## FIELD OF APPLICATION

- Waterproofing roof gardens and inverted roofs.
- Waterproofing sheet metal roofs.
- Waterproofing steps and stands in stadiums.
- Waterproofing bridge and viaduct decks

## SUITABLE SUBSTRATES

- Cold waterproofing masonry or concrete poured over bare ground.
- Waterproofing flat or curved surfaces on structures below ground level, such as man-made tunnels and underpasses.
- Waterproofing horizontal concrete structures below screeds isolated with PE sheets.

## LIMITATIONS

- Do not mix with solvents;
- Do not use if the temperature is lower than +5°C or higher than +30°C;
- Do not use in damp or rainy weather;
- Do not use to waterproof surfaces exposed to UV rays;
- Do not use with water in counter-pressure;
- Do not use if there is no protective drainage layer;
- Do not use if the drainage layer subjects the waterproofing layer to linear or spots load.

## APPLICATION PROCEDURE

### A) *Preparing the substrate*

The substrate to be treated must be mechanically robust and clean. Remove all cement laitance, traces of powder, flaky parts, grease, oil, and form release agents by sandblasting or washing down with a high-pressure water pump. If the substrate to be waterproofed and protected with Aquashield PU 2K Plus is in poor condition, remove the damaged parts manually or mechanical abrasion by using a hydro-demolition system or a hydro-scarified. The last technique, which uses high-pressure

re water, is recommended because the reinforcement rods are not damaged. The structures that are not subject to vibration could cause small cracks in adjacent concrete. Once the rust has been entirely removed by sandblasting, repair with a pre-blended repairing mortar. Absorbent surfaces to be treated with Aquashield PU 2K Plus must be primed with Seal Primer. Existing floors, which are covered in tiles, must be well bonded to the substrate, and the surface of tiles must be free of substances that could compromise the adhesion of Aquashield PU 2K Plus, such as oil, grease, paint, wax, etc. In order to remove material that could affect the adhesion of Aquashield PU 2K Plus, clean the floor with detergents and water. After this, the surface must be treated with Epoxy based Primer.

### ***B) Preparing the product***

The two components which form Aquashield PU 2K Plus are supplied pre-dosed. Mix the thixotropic emulsion component A at a low speed (400 rev/min) until it becomes liquid. Add the powder component B while mixing and continue mixing until a smooth, lump-free blend is obtained. Once blended, the product has a pot life of approximately 2 hours at +23°C.

### ***C) Applying the product***

Aquashield PU 2K Plus must be applied in two layers with a brush or a long-haired roller. Before applying the second layer, wait until the first coat is dry, making sure the product becomes darker with a matt finish. The second layer is applied diagonally to the first one. The final thickness of the two layers of Aquashield PU 2K Plus must be at least 0.8 mm to create a solid, flexible, and continuous film. Ensure there are no interruptions in the film caused by imperfections in the substrate.

## **COVERAGE / CONSUMPTION**

The approximate consumption is 1 – 1.5 kg/m<sup>2</sup>

## **PACKAGING**

Aquashield PU 2K Plus is supplied in:

- 5 kg plastic buckets A+B
- 20 kg plastic buckets A+B

## **SHELF LIFE-STORAGE**

Original sealed packaging of this product is guaranteed to be of first quality for 24 months if stored in a dry area. The high humidity will reduce the shelf life of the bagged product.

## **SAFETY INSTRUCTION**

Aquashield PU 2K Plus component A is harmful and irritant for the eyes. Aquashield PU 2K Plus component B is irritant for the skin, the eyes and the respiratory system. It may cause sensitization when inhaled and frequent contact with the skin may cause an allergic reaction in those sensitive to isocyanates. It is harmful when inhaled and may cause irreversible damages if it is used for lengthy periods. During use wear protective clothing, gloves, safety goggles and a mask to protect the respiratory tract, and use only in well ventilated areas. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention. Furthermore, Aquashield PU 2K Plus component A is hazardous for aquatic life, do not dispose of the product in the environment. For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet. **PRODUCT ONLY FOR PROFESSIONAL USE.**

## TECHNICAL DATA

### Product identity

	Component A	Component A
Consistency	thick paste	liquid
Color	grey	transparent
Density (g/cm <sup>3</sup> )	1.05	1.05
Dry solids content (%)	100	100
Brookfield viscosity at +23°C - 50% R.H. (mPa·s)	18,000	

### Application data (at +23°C and 50% R.H.)

Mixing ratio	1:1
Density of mix (kg/m <sup>3</sup> )	1,000
Pot life	1 hours
Minimum filming forming temperature	+5°C
Recommended application temperature	+5°C to +35°C
Waiting time between the coats on walls	approximately 60 minutes
Waiting time between the coats on the floor	3-4 hours
Complete drying	48 hours

### Final performances

Temperature when in use	-30°C to +80°C
Crack-bridging (according to ZDB) (mm)	1.5
Tensile breakage load (N/mm <sup>2</sup> ) (according to DIN 53504- S3a)	4.5



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