

### INTRODUCTION:

**POWERDEK® 500** is a one-component polyurethane, waterproofing liquid membrane for flat surfaces, offering:

- ) Excellent mechanical, chemical, thermal, UV and weather resistance properties, as it is based on pure, elastomeric, hydrophobic, polyurethane resins.
- ) A uniform, elastic, waterproof, vapor- permeable sealing layer, without forming seams or joints.
- ) Excellent bonding to various substrates like concrete, cement mortars, wood and most waterproofing layers.
- ) Applicability, even on irregular substrates.
- ) Suitability for green roofs, flower beds, etc.
- ) Availability in white or other colors. When a dark color of **POWERDEK® 500** has been chosen as an exposed layer, it is necessary to cover it with a layer of **AQUATHANE®** of the same color.

Certified with the CE marking as a coating for surface protection of concrete, according to EN 1504-2.

In addition, the product has been checked according to the requirements of ETAG-005 and is classified as: W3, S, TL4-TH4, P4 special, which means that its expected working life is 25 years under the worst control conditions, as these are defined by the standard concerning the user loads (P4), the climatic zone (S) and the resistance to maximum and minimum operating temperatures (TL4-TH4).

**POWERDEK® 500** is certified as root resistant coating.

### Unique Features:

- ) Superior flexibility
- ) Bridges substrate crack up to 2mm
- ) Long term crack resistance
- ) Superior freeze/thaw resistance
- ) Self curing
- ) Very low shrinkage
- ) Non-toxic
- ) Easy application, single component, hence no mixing problems.

### AREA OF USES:

**POWERDEK® 500** is ideal for waterproofing:

- ) Flat roofs and balconies as an exposed waterproofing membrane.
- ) Underneath tile layers in kitchens, bathrooms, balconies and flat roofs, as long as quartz sand has been broadcasted on its last layer.
- ) Under thermal insulation boards on flat roofs.
- ) In construction works, such as highways, bridge decks, tunnels etc.
- ) Foundations.
- ) Gypsum and cement boards.
- ) Old layers of bituminous or EPDM membranes.
- ) Polyurethane foam.
- ) Metal surfaces.

### ADVANTAGES:

**SIMPLE PACKAGE:** Material is pre-packaged in a convenient and easy to handle size. Requires no site mixing.

**EASY TO USE:** Brush or spray applied, normally in two coats.

**ADHESIVE:** Excellent adhesion to steel and sound prepared concrete substrates.

**QUICK DRYING:** Typically touch dry in 1 hours (depending on humidity).

**SAFE:** Non-toxic when cured, nonhazardous, solvent and plasticizer free.

**IMPERMEABLE:** Very high resistance to water permeability and diffusion to carbon dioxide gas.

**COST EFFECT:** Economical.

**OVERCOATING:** Easily over coated with other specialist membranes in the Multichem range to provide further protection and aesthetic quality.

### TECHNICAL DATA:

PROPERTIES	RESULTS
Form & Appearance	Single Pack Polyurethane Paste
Open Time	60 minutes @ 25 °C
Packaging	20 Kg bucket
Specific Density	1.3-1.4
Tensile Strength	6 N/mm <sup>2</sup>
Adhesion Strength, ASTM D 1000	2 N/ mm <sup>2</sup>
Viscosity,	4000 mPa S
CO2 permeability, Sd	>50 m
Coverage	1.5-2.5 Kg/m <sup>2</sup>
Crack Bridging Capacity	2 mm
Water Permeability, DIN 1048	Nil at 7 bar of hydrostatic pressure
Water Vapour Permeability	<0.4 gm/m <sup>2</sup> /day
Colour	Gray, White
Shore A Hardness, ASTM D2240	>40±5
Elongation,%	>600%
Expected Working Life	25 years
Climatic Zone	S (Severe)
Shelf Life	1 year from date of manufacturing

### APPLICATION DATA:

#### SURFACE PREPARATION

In general, the substrate must be dry (moisture content < 4%), clean, free of grease, loose particles, dust etc.

##### Concrete substrates

Any existing cavities in concrete should be filled with the appropriate repairing materials in advance.

Intense cracks on the substrate must be primed locally and after 2-3 hours (depending the weather conditions) must be sealed with the polyurethane sealants **MULTIFLEX PU**.

#### PRIMING

Concrete and other porous surfaces with moisture content < 4% should be treated with the special primer **MULTITHANE® PRIMER 21**, at a consumption of approx. 200 g/m<sup>2</sup>.

Surfaces with moisture content > 4% should be primed with the special two component epoxy primer **AQUABLOCK® PRIMER**, at a consumption of 100-200 g/m<sup>2</sup>.

#### PLACING

Before the application, it is recommended to slightly stir **POWERDEK® 500**, until it becomes homogeneous. Extensive stirring should be avoided, in order to prevent air entrapment in the material.

**POWERDEK® 500** is applied by brush or roller in 2 layers. The first layer is applied 2-3 hours after priming and while **MULTITHANE PRIMER 21** is still tacky. The second layer should be applied crosswise after 8-24 hours, depending on the weather conditions.

Consumption: approx. 1.0-1.5 kg/m<sup>2</sup>, depending on the substrate.

In case of dense, multiple cracks all over the surface, it is strongly recommended to thoroughly reinforce **POWERDEK® 500** membrane with 100 cm wide strips of polyester fleece (60 g/m<sup>2</sup>). These placed strips must overlap one another by 5-10 cm. In detail, 2-3 hours after priming, the first layer of **POWERDEK® 500** is applied, in order to cover the reinforcement (to a width of 100 cm), and while still fresh, a strip of polyester fabric is embedded. The same application procedure is followed in the remaining surface.

Then, two extra layers of **POWERDEK® 500** are applied on the entire surface. Consumption: approximately 2.0-2.25 kg/m<sup>2</sup>, depending on the substrate and type of reinforcement.

### Remarks

- ) In case of application by spraying, it may be diluted, depending on the weather conditions, up to 10%, only with the special solvent SM-16.
- ) **POWERDEK™ 500** is not suitable for contact with chemically treated water of swimming pools.
- ) Temperature during the application and hardening of the product should be between +8°C and +35°C.
- ) The consumption of **POWERDEK® 500** should not exceed 750 g/m<sup>2</sup> per layer.
- ) Unsealed packages should be used as soon as they are opened and cannot be restored.

### CLEANING

All tools should be cleaned with solvent immediately after use.

### STORAGE:

Store in dry, frost-free conditions at moderate temperature not **greater** than 25 °C.

### IMPORTANT POINTS:

- 1) Apply only to clean, sound substrates. Concrete should be surface-dry and free of water backpressure.
- 2) Care should be taken when curing in hot, sunny or windy conditions.
- 3) Discard **POWERDEK® 500** packages which has been subjected to freezing temperatures.

### PACKAGING:

Pack Size: 5, 20 kg

### SAFETY DATA:

- ) Irritating to eyes, respiratory systems and skin.
- ) Risk of serious damage to eyes.
- ) Keep out of reach of children. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- ) After contact with skin, wash immediately with plenty of clean water.
- ) Wear suitable protective clothing, gloves and eye/face protection.



# POWERDEK® 500

## Single Component High Duty Waterproofing Coating

### WARRANTY

Multichem warrants Multiguard POWERDEK® 500 to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of POWERDEK® 500.

Because the Multichem does not perform the actual installation, it cannot be held responsible for the results of the application. Multichem specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques.

This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Multichem part. Multichem neither assumes nor authorizes any person to assume for Multichem any liability in connection with the sale and installation of POWERDEK® 500.

Because of constant improvement of manufacturing techniques and formulations, Company reserves rights to change this datasheet and its contents without prior notice.



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