



HOME SHIELD ULTRASEAL Polyurea MP500

An Instant Curing Flexible Pure Polyurea

- A. Product Description:** Home Shield Ultraseal Polyurea MP500 is a spray-applied, 100% solids, flexible, two-component, rapid curing pure Polyurea system, designed as a durable, seamless waterproofing and protective coating with long life span.

Home Shield Ultraseal Polyurea MP500 consists of two main components Comp. A: MDI-Prepolymer and Comp. B: Polyolamin Mixture. The system offers a permanently flexible, seamless Waterproofing solution for a wide range of substrates. Its rapid application and instant curing characteristics enable shorter shut down times than traditional Waterproofing products.

B. Features

- Extremely fast application time. Tack free in seconds – walk on in minutes
- Seamless Waterproofing.
- Excellent adhesion to nearly all substrates - concrete, steel, aluminium, wood, foam etc.
- Can transgress multiple substrate types in one application
- Good tensile and structural strength
- No need to use protector boards when back filling
- 100% solids, VOC-free, Solvent free
- Good abrasion resistance & impact resistance
- Excellent thermal stability
- Rapid return to service saves time and money
- Excellent cost-benefits ratio

SCIENTIFIC WATERPROOFING SOLUTIONS

C. Typical Usage

- Large scale Waterproofing for Commercial, Industrial & manufacturing facilities
- Waterproofing of high impact areas. – Plant rooms, trafficable roof decks
- Waterproofing for areas exposed to high wind abrasion
- Waterproofing of water features, pools and ponds
- Under concrete screed Waterproofing of large scale podium decks
- Bridge, street and tunnel construction Waterproofing
- Waterproofing and containment applications where high humidity and high levels of residual moisture are not factors to be considered during application

D. PROCESSING PROPERTIES	DATA
Mixing ratio of Comp. A to Comp. B	1 : 1 by volume
Material consumption	Approx. 1 kg/m ² for 1mm thickness
Recommended thickness	Minimum: 1.0 mm
Gel time at 20°C [sec.]	10 – 15 (dependent on ambient and substrate temperature)
Tack Free-Time at 20°C [sec.]	15 – 30 (dependent on ambient and substrate temperature)
Over coat cycle [h]	0 – 12 Hours (without prep and priming)
Curing/loading after [h]	Foot traffic: 1, Mechanical: 2-4 Chemical: 12-24
Temperature range for application (ambience) [°C]	-10 - +50
Temperature range for application (substrate) [°C]	-10 - +50
Material Temperature (Preconditioning) [°C]	25–30
Material Temperature (Spraying) [°C]	65–75
Maximal relative air humidity for application [%]	80–85
Pay attention to the dew point limit	min. 3K > DP (dew point)

E. PHYSICAL PROPERTIES	DATA PART 1	
Chemical Base	-	Comp. A: MDI-Prepolymer Comp. B: Polyolamin Mixture
VOC-content	DIN EN ISO 11890-1 /ASTM D-1259	0%
Solids content	DIN EN 827 / ASTM D-2697	100%
Colour	-	Straw / Brownish colour un-pigmented - Other colours on request
Viscosity [mPa*s] @ 25°C	DIN EN ISO 2884-2 / ASTM D-4878	Comp. A: 300 – 900, Comp B: 700 – 1.200
Density [g/cm ³] @ 20°C	DIN EN ISO 2811-1 / ASTM D-1217	Comp. A: 1.09 – 1.13, Comp. B: 0.99 – 1.03
Density [g/cm ³]	EN ISO 1183 / ASTM D-792	0.99 ± 0.02
Tensile strength [MPa]	ISO 37 / ASTM D-638	≥ 13
Elongation at break [%]	ISO 37 / ASTM D-638	450%
Modul [Mpa]	ISO 37 / ASTM D-638	100% elongation ≥ 7, 300% elongation: ≥ 10
Hardness [Shore A]	ISO 868-2003 / ASTM D-2240	89±5
Hardness [Shore D]	ISO 868-2003 / ASTM D-2240	35±5
Rebound resilience [%]	ISO 4662 / ASTM	≥ 38
Tear growth resistance [N/mm]	ISO 34-1 method A	≥ 17
Volume abrasion [mm ³]	DIN ISO 4649	no datas available
Taber Abrasion [mg]	ASTM D-4060	10 (Wheel CS17 / 1.000g / 1000 Cycles) 110 (Wheel H18 / 1.000g / 1000 Cycles)
Fire Protection Classification	ASTM E-108	Class A (Spread of flame/ slope 1:12)
Peel off strength [N/mm]	ISO 813 / ASTM	Concrete: ≥ 3, Steel: ≥ 6
Pull off strength [N/mm ²]	DIN EN ISO 4624 / ASTM D-4541	Concrete: ≥ 1.5, Steel: ≥ 4
Max. Process temp. [°C]	ISO 11346 / ASTM D-2485	Wet: 50, Dry: 110, Peak temperature dry: 130
Min. Process temp. [°C]	ISO 11346 / ASTM D-2485	-40

F. PHYSICAL PROPERTIES	DATA PART 2	
Heat Conductivity [W/m*K]	-	0.245
Surface resistance [Ohm]	DIN IEC 60167	$\geq 1.0 \cdot 10^{11}$
Volume resistance [Ohm]	DIN IEC 60093	$\geq 1.0 \cdot 10^{11}$
Storage conditions [°C]	DIN EN 12701	10 – 30 (in closed original drums, stored at dry and well ventilated place; beware of freezing)
Shelf life	-	Approx 12 months

All data measured at 77°F @ 50%rH. Meanderings at different ambience- and processing parameters have to be taken into account.

G. Application Notes

The gel times and tack free times depend on the surrounding climatic conditions and the temperature of the substrate, e.g. ambient temperature, substrate temperature, relative humidity and ventilation etc. Therefore the data specified above can only be used as a guide.

H. Storage

Home Shield Ultraseal Polyurea MP500 has a shelf life of 12 months when kept in a dry ventilated atmosphere and temperature between +10°C and +30°C in the original unopened drums.

I. Health and Safety

For further information refer to appropriate Product Safety Data Sheet.

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