

## QUICKSEAL MP 500 REFLECT SILVER

## SILVER ELASTOMERIC LINING SYSTEM FOR SPECIAL

**QuickSeal MP 500 Reflect Silver** is a highly-reflective elastomeric coating incorporating unique reflective chemistry. QuickSeal MP 500 Reflect Silver provides all the benefits of VIP's spray applied, instant curing, seamless membranes with the additional advantage of reflecting the sun's heat and UV rays.

**QuickSeal MP 500 Reflect Silver** reduces the heat transfer of the sun's rays into the building, lowering internal temperatures and reducing cooling costs in combination with higher elongation properties.

**QuickSpray MP 500 Reflect Silver** generates a long-lasting, flexible, seamless, waterproofing membrane with significant energy-saving advantages. Its rapid spray application and instant curing characteristics enable projects to be completed in a fraction of the time required by traditional roll-on and torch-on waterproofing products.

### TECHNICAL BACKGROUND

The steady-state surface temperature ( $T_s$ ) under the sun is strongly related to solar reflectivity and thermal emissivity of the surface. For equivalent conditions, the  $T_s$  of dark surfaces (with low solar reflectance) is higher than light-colored surfaces (with high solar reflectivity); and surfaces with low thermal emissivity have higher  $T_s$ 's than surfaces with high thermal emissivity. The procedure recommended in this standard will allow a direct comparison of  $T_s$  of surfaces under the sun. The procedure defines a Solar Reflectance Index (SRI) that measures the relative  $T_s$  of a surface with respect to the standard white (SRI = 100) and standard black (SRI = 0) under the standard solar and ambient conditions.

### USES

- Waterproofing of roofs subject to high UV exposure – reduces internal operating temperatures and/or cooling costs
- Manufacturing plants/factories, plant rooms, power stations, schools, offices, residential houses
- Low-slope roofs according to LEED (US Green Building Council's Leadership in Energy and Environmental Design)
- Car park roofing /decking
- Heat reduction applications – lowers cooling / operating costs
- Waterproofing and substrate protection for areas exposed to high wind loads, abrasion and impact



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### FEATURES

- High Solar Reflectance Index (SRI)
- Superior thermal emittance
- Can be applied under extreme climatic conditions
- Extremely fast application time
- Tack free in seconds – walk on in minutes
- Rapid return to service saves time and money
- Seamless Waterproofing. No welding of joins – totally seamless
- Excellent adhesion to nearly all substrates - concrete, steel, aluminum, fibers, wood, foam etc.
- Can transgress multiple substrate types in one application
- Insensitive to moisture and humidity during application process
- High elongation at break
- Excellent tensile and structural strength
- 100% solids, VOC-free, Solvent free
- Saltwater and chemical resistant
- High abrasion and impact resistance
- Excellent thermal stability

### SURFACE PREPARATION

All cementitious substrates must be structurally sound. Surfaces must be entirely free of oil, grease, paint, dust, curing agents, release agents or other surface contamination. Loose or unsound material should be removed. Sweep and vacuum to remove all dust and debris.

Steel substrates should be prepared to a class 2 ½ near white blast finish with a surface profile of 80 microns.

Mask all adjacent surfaces and protect the surrounding area from overspray. Do not apply unless the substrate temperature is 3°C or greater than dew point.

### APPLICATION

**QuickSeal MP 500 Reflect Silver** should only be applied by applicators who have been trained and are currently approved by the manufacturer. To obtain optimum results, **QuickSeal MP 500 Reflect Silver** should be spray applied when the ambient air and surface temperature is between 5°C und 50°C Celsius. Use high-pressure plural component spray equipment, 2:1 transfer pumps are recommended to transport the material from the storage vessel to the proportioning pump. The plural component proportioning spray machine must be capable of supplying each component within +/- 10% of the desired 1:1 by volume mixing ratio. Hose heaters should be set to ensure material is delivered at 70°C to the spray gun. Hose pressures and temperature will vary dependent on the equipment used and site conditions and temperature.

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## **PROCESSING PROPERTIES**

## **INFORMATION ABOUT THE USE OF THE PRODUCT**

	DATA
Mixing ratio of Comp. A to Comp. B	1 : 1 by volume
Material consumption [kg/m <sup>2</sup> /1mm]	Approx. 1.0 - 1.2
Recommended thickness [mm]	Minimum: 0.5 (on steel) Minimum: 1.5 (on concrete) Maximum: indefinite
Gel time at 25°C [sec.]	5 - 10 (dependent on the temperature of the substrate)
Tack Free-Time at 25°C [sec.]	15 - 20 (dependent on the temperature of the ambient)
Over coat cycle [h]	0 - 8 (without any pre-treatment)
Curing/loading after [h]	Walkable: 1 Mechanical: 2 Chemical: 12
Temperature range for application (ambient) [°C]	0- +50
Temperature range for application (substrate) [°C]	
Material Temperature (Preconditioning) [°C]	25 - 30
Material Temperature (Spraying) [°C]	Comp. A: 70 - 80 Comp. A: 75 - 80
Maximal relative air humidity for application [%]	98
Pay attention to the dew point limit	min. 3K > DP (dew point)

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### PHYSICAL PROPERTIES

### INFORMATION ABOUT THE USE OF THE PRODUCT

	DATA	
Chemical Base	–	Comp. A: MDI-Prepolymer Comp. B: Polyetheramine mixture
VOC-content	DIN EN ISO 11890-1 / ASTM D-1259	0%
Solids content	DIN EN 827 / ASTM D-2697	100%
Color	–	Silver
Viscosity [mPa·s] @ 25° C	DIN EN ISO 2884-2 / ASTM D-4878	Comp. A: 300 – 900 Comp. B: 900 – 1.300
Density [g/cm³] @ 20° C	DIN EN ISO 2811-2 / ASTM D-1217	Comp. A: 1.11 ± 0,02 Comp. B: 1.06 ± 0.02
Density [g/cm³]	EN ISO 1183 / ASTM D-792	1.04 ± 0.02
Tensile strength [MPa]	ISO 37 / ASTM D-638	≥ 11
Modul [MPa]		100% Elongation: 8,3
Elongation at break [%]		≥ 205
Hardness [Shore D]	ISO 868 / ASTM D-2240	45 ± 5
Rebound resilience [%]	ISO 4662 / ASTM D-7121	≥ 30
Tear growth resistance[N/mm]	ISO 34-1 method A	≥ 13
Volume abrasion [mm³]	DIN ISO 4649	≤ 250

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Taber Abrasion [mg]	ASTM D-4060	< 8 (Wheel CS17 / 1.000g / 1000 Cycles) < 80 (Wheel H18 / 1.000g / 1000 Cycles)
Peel off strength [N/mm]	ISO 813 / ASTM D-903	Concrete: ≥ 4 Steel: ≥ 8
Pull off strength [N/mm <sup>2</sup> ]	DIN EN ISO 4624 / ASTM D-4541	Concrete: ≥ 1,5 Steel: ≥ 6
Min. Process temp. [°C]	ASTM D-2485	Dry: -40
Max. Process temp. [°C]	ISO 11346 / ASTM D-2485	Wet: 60 Dry: 130 Peak temperature dry: 150
Surface resistance [Ohm]	DIN IEC 60167	≥ 1,0*10 <sup>11</sup>
Volume resistance [Ohm]	DIN IEC 60093	
Storage conditions [°C]	DIN EN 12701	10 – 30 (in closed original drums, stored at dry and well ventilated place; beware of freezing)
Shelf life	–	Approximately 12 months unopened and stored correctly



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### IMPORTANT NOTE

All test results and timings provided are based on tests carried out in laboratory conditions. Substrate and atmospheric temperature, humidity, condition and application thickness will all influence these results and therefore they must be used as a guide only.

**QuickSeal MP 500 Reflect Silver** is UV stable, therefore UV light will not affect its functional characteristics. Furthermore **QuickSeal MP 500 Reflect Silver** is colour-fast, because of the chemical formulation and the incorporated special pigments.

### PACKING

20 and 200 Liter drums on request IBC's.

### STORAGE / SHELF LIFE

When stored in dry conditions out of direct sunlight in original unopened packaging, this product has a shelf life of approximately 12 months from the date of manufacture. Avoid storing product in temperatures above 35°C and below 10°C as this may reduce the products shelf life.

Drums, including empty drums should always be kept tightly sealed. During storage and processing, avoid any contamination with other liquids and moist air which may cause solids to form leading to blockages in filters, pumps and/or pipelines.

### CLEANING

Prior to curing, tools may be cleaned with cleaning solvents. Once hard, by mechanical means only.

### TECHNICAL SERVICES

Detailed technical assistance and further information regarding this system and its relevant application specifications are available from VIP Technical Services.

### HEALTH AND SAFETY

Respiratory protection is mandatory for all sprayers and workers in the immediate vicinity of spray operations. A copy of the Model Respiratory Protection Program, developed by API is available at [www.polyurethane.org](http://www.polyurethane.org) and from the supplier.

### DISCLAIMER

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### ISSUE DATE: SEPTEMBER 2019

This technical specification supersedes all previous data sheets.