



DELTAShield Hybrid 500

TWO COMPONENT SPRAY APPLIED, SEAMLESS GENERAL-PURPOSE PROTECTIVE LINING

DESCRIPTION

DELTAShield Hybrid 500 is a spray applied, instant curing flexible membrane formulated from hybrid Polyurea technology, that can be built to any thickness in one application.

DELTAShield Hybrid 500 provides a very flexible, seamless, hard-wearing substrate waterproofing and substrate protection solution for a wide range of substrates. Its rapid spray application and instant curing characteristics enable shorter application times than traditional glue or weld in place and torch on membranes. Waterproofing integrity around difficult shapes and multiple substrate types is easily achieved with **DELTAShield Hybrid 500** removing these application risks.

TYPICAL USES

- ✓ 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
- ✓ Anti-root sub terrain Waterproofing.

FEATURES

- ✓ High Elongation property
- ✓ Excellent cost to benefits ratio
- ✓ 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 joints – totally seamless.
- ✓ Conforms exactly to substrate shapes eliminating potential stress points when covering with final floor slabs or other toppings such as pavers.
- ✓ Excellent adhesion to nearly all substrates - concrete, steel, aluminum, 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
- ✓ Good impact resistance
- ✓ Excellent thermal stability



PRODUCT INFORMATION

PROCESSING PROPERTIES	DATA	
Mixing ratio of Comp. A to Comp. B	1:1 by volume	
Material consumption [kg/m ² /1mm]	Approx. 1	
Dry film thickness range [mm] For project specific DFT recommendations consult with manufacturer.	Steel Minimum: 1 Concrete Minimum: 2	Maximum: indefinite Maximum: indefinite
Recommended thickness [mm]	Minimum: 2 on concrete	Max: unlimited.
Tack Free-Time at 20°C [sec.]	10 - 20	
Over coat window [h]	0 – 12 hours (without prep and priming)	
Curing/loading after [h]	Foot traffic: 1	Mechanical: 2 Chemical: 12 - 24
Temperature range for application (ambient) [°C]	-10 to +50	
Temperature range for application (substrate) [°C]	-10 to +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	Substrate should be 3°C greater than DP (dew point)	

PHYSICAL PROPERTIES	DATA	
Chemical Base	-	Comp. A: MDI - Prepolymer Comp. B: Polyether amine and Polyol - Mixture
VOC-content	DIN EN ISO 11890-1 / ASTM D-1259	0%
Solids content	DIN EN 827 / ASTM D-2697	100%
Viscosity [mPas] @ 23°C (cone and plate, S3, 100rpm)	DIN EN ISO 329/A3 / ASTM D-4878	Comp. A: 1,500 – 2,000 Comp. B: 2,000 – 2,000
Density [g/ml]	DIN EN ISO 2811-1 / ASTM D-1217	Comp. A: 1,09 – 1,13 Comp. B: 1.05 – 1.20
Density [g/cm ³]	EN ISO 1183 / ASTM D-792	1,00 ± 0,02
Tensile strength [MPa]	ISO 37-2005 / ASTM D-412	≥ 14-16
Elongation at break [%]	ISO 37-2005 / ASTM D-638	500 – 550
Hardness [Shore D]	ISO 868-2003 / ASTM D-2240	40 ± 5
Tear strength [kN/mm]	ISO 34-1 method A	40
Taber Abrasion [mg]	ASTM D-4060	< 10 (Wheel CS17 / 1.000g / 1000 Cycles) < 110 (Wheel H18 / 1.000g / 1000 Cycles)
Pull off strength [N/mm ²]	DIN EN ISO 4624 / ASTM D-4541	Concrete: ≥ 1.5 Steel: ≥ 4
Storage conditions [°C]	DIN EN 12701	10 – 30 (Avoid product freezing)
Shelf life		Approximately 12 months unopened and stored correctly

* DELTA recommends in all applications involving chemicals a pre-test of the lining's suitability in the customer's application is conducted. Consult with DELTA Technical Team.

* DELTAShield Hybrid 500 is an aromatic based system and can display color shift under UV light. DELTA recommends top coating DELTAShield Hybrid 500 when exposed to UV light.



APPLICATION NOTES

- **DELTAShield Hybrid 500** can only be applied using high pressure heated plural component spray equipment by trained and approved applicators.
- In ambient temperatures below 15°C chemical drums should be pre-heated using band heaters to 30 – 40°C.
- The B-side component should be thoroughly power stirred prior to the commencement of spraying and periodically during the spraying process to ensure there is no settling out of the B-side chemical components.
- The Pigment is always mixed into the B-side using a power stirrer.
- Both the A-side and B-side drums should be fitted with desiccant dryers.
- Compressed air supply should be supplied via an air dryer.
- Primary heaters should be set at between 65-75°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.
- Hose heaters should be set at 70°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.

SAFETY AND HANDLING

- All applicators of **DELTAShield Hybrid 500** should be trained and approved by the manufacturer.
- Spray applicators should wear appropriate PPE including approved breathing equipment, eye wear, Nylex or similar light weight spray suit and appropriate covered footwear.
- Avoid breathing in vapors during spraying or when handling chemicals.
- Avoid eye and skin contact.
- Store chemical drums in a cool dry environment. Avoid storing chemicals for long periods in direct sunlight.
- Do not store chemicals next to food stuffs.
- Ensure chemical drums are kept tightly sealed and avoid ingress of air and moisture.

PACKAGING

DELTAShield Hybrid 500 is supplied in 40 or 425 kg sets.

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own investigations and testing, the suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. Due to the large number of variables that can affect the product and the application process that are out of the control of DELTA Coatings International LLC no warranty of any kind, express or implied is given. The liability of DELTA Coatings International LLC for any claims is limited to the purchase value of the material.

Version 220523