

# DELTAShield Hybrid 200

TWO COMPONENT SPRAY APPLIED, SEAMLESS GENERAL PURPOSE PROTECTIVE LINING.

## DESCRIPTION

**DeltaShield Hybrid 200** 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 200** provides a flexible, seamless, hard wearing substrate protection solution for a wide range of substrates. Its rapid spray application and instant curing characteristics enable shorter shut down times than traditional glue in place rubber membranes or fix in place jointed panel products.

## 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

## FEATURES

- ✓ 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
- ✓ 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 <sup>2</sup> /1mm]	Approx. 1
Recommended thickness [mm]	Minimum: 1.5                      Max: unlimited.
Gel time at 20°C [sec.]	5 - 10 (dependent on ambient and substrate temperature)
Tack Free-Time at 20°C [sec.]	15 - 30 (dependent on ambient and substrate temperature)
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	Min. 3K > 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%
Colour	Brownish colour (unpigmented version)
Viscosity [mPa*s] @ 25°C	DIN EN ISO 2884-2 / ASTM D-4878 Comp. A: 500 – 1,000                      Comp. B: 700 – 1,200
Density [g/cm <sup>3</sup> ] @ 20°C	DIN EN ISO 2811-1 / ASTM D-1217 Comp. A: 1,09 – 1,13                      Comp. B: 0.98 – 1.02
Density [g/cm <sup>3</sup> ]	EN ISO 1183 / ASTM D-792 1,00 ± 0,02
Tensile strength [MPa]	ISO 37-2005 / ASTM D-638 ≥ 14
Modul [MPa]	ISO 37-2005 / ASTM D-638 100% Elongation: ≥ 8                      300% Elongation: n/a
Elongation at break [%]	ISO 37-2005 / ASTM D-638 200 - 250
Hardness [Shore D]	ISO 868-2003 / ASTM D-2240 40 ± 5
Rebound resilience [%]	ISO 4662 / ASTM ≥ 38
Tear growth resistance[N/mm]	ISO 34-1 method A ≥ 10
Volume abrasion [mm <sup>3</sup> ]	DIN ISO 4649 ≤ 300
Taber Abrasion [mg]	ASTM D-4060 < 10 (Wheel CS17 / 1.000g / 1000 Cycles) < 110 (Wheel H18 / 1.000g / 1000 Cycles)
Peel off strength [N/mm]	ISO 813 / ASTM Concrete: ≥ 3                      Steel: ≥ 6

PHYSICAL PROPERTIES	DATA		
Pull off strength [N/mm <sup>2</sup> ]	DIN EN ISO 4624 / ASTM D-4541	Concrete: $\geq 1.5$	Steel: $\geq 4$
Max. Process temp. [°C]	ISO 11346 / ASTM D-2485	Wet: 45	Dry: 90      Peak temperature dry: 110
Min. Process temp. [°C]	ISO 11346 / ASTM D-2485	-40	
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	-	Approximately 12 months unopened and stored correctly	

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

*DeltaShield Hybrid 250* is an aromatic based system and can display colour shift under UV light. This colour shift will not negatively affect the products physical performance.

## 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.

**DELTAShield Hybrid 200 must be top coated when used in applications where it will be exposed to UV light.**

## SAFETY AND HANDLING

- All applicators of **DeltaShield Hybrid 200** 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 vapours 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.

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