DELTAShield HP 500 PW

TECHNICAL DATA SHEET

Two component spray applied polyurea for potable water solutions certified by WRAS

Description

HP 500 PW is an instant curing, hot spray applied, seamless and flexible protective polyurea membrane that exhibits excellent impact and tear growth resistance. It will not crack or peel even under the harshest conditions and requires no maintenance.

HP 500 PW is WRAS certified for use in potable water applications up to 85° C and is a system designed to store water fit for human consumption.

Features

- Potable Water Approved according to BS 6920 and WRAS Certified
- Spray applied seamless application to any thickness in one go
- 10 seconds reactivity and tack free time
- Fast return to service
- Long life cycle
- Excellent adhesion to most surfaces
- Can be applied in humid conditions
- High impact and abrasion resistance
- Is flexible and non brittle up to 85° C
- 100 % solids, VOC free and no solvents
- UV, chlorine and saltwater resistant
- Suitable for exposed applications
- High crack bridging capability

Typical uses

- Potable water reservoirs, storage tanks, canals and via-ducts
- Rainwater storage tanks
- Fish breeding tanks
- Desalination plants
- Water bottling and cleaning plants

DELTA COATINGS INTERNATIONAL

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www.deltacoatings.com

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Product information

Processing properties	Data		
Mixing ratio A : B [by volume]	1: 1		
Dry film thickness range [mm] (For project specific DFT recommendations consult with manufacturer)	Steel	Minimum: 1	Maximum: indefinite
	Concrete	Minimum: 2	Maximum: indefinite
Tack Free-Time at 20° C [sec.]	10 - 20		
Over coat cycle (without any pre-treatment) [h]	0 – 12		
Curing/loading after [h]	Walkable: 1	Mechanical: 2	Chemical: 12 - 24
Temperature range for application (ambient) [° 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 [%]	98		
Dew point limit	Substrate should be 3° C > dew point		
Storage conditions (closed original drums, dry & covered place) [° C]	10 – 30		
Shelf life (unopened and stored correctly) [year]	1		

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Product information

Physical properties	Data	
VOC	ASTM D-1259	0%
Solids [%]	ASTM D-2697	100
Viscosity [mPa*s] @ 25° C	ASTM D-4878	Comp. A: 600 – 1000 Comp. B: 500 – 700
Density [g/cm³] @ 20° C	ASTM D-1217	Comp. A: 1.09 – 1.13 Comp. B: 1.01 – 1.04
Density [g/cm³]	ASTM D-792	1,01 ± 1,05
Tensile strength [N/mm²]	ASTM D-638-22	≥ 20 ± 2
Elongation at break [%]	ASTM D-638-22	≥ 500
Hardness [Shore D]	ASTM D-2240-15(2021)	50 ± 5
Tear strength[N/mm]	ASTM D624-00(2020)	85 ± 5
Pull off strength [N/mm²]	ASTM D-4541	Concrete: ≥ 1,5 Steel: ≥ 6
Water vapor transmission rate [g/m²/24hours]	ASTM E96-22	5 (at 23° C a. 50% relative humidity)

- DELTA recommends in all applications involving chemicals a pretest of the lining's suitability in the customer`s application is conducted. Consult with DELTA Technical Team
- All data depends on site conditions. Ambient temperatures, substrate temperatures and humidity will all influence stated data
- Film thickness and application techniques can also affect the stated data
- Cold temperatures will result in slower curing times and high temperatures will increase reactivity and reduce curing times relative to the stated data

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D E L T A S h i e l d

H P 5 0 0 P W

T E C H N I C A L D A T A S H E E T

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Application notes

- **HP 500 PW** should be applied in strict accordance with project specific application methodologies recommended by the manufacturer
- **HP 500 PW** can only be applied using high pressure heated plural component spray reactors, such as Graco EXP2/3, by professionally trained and approved applicators
- Substrate to be prepared prior to application of **HP 500 PW**, according to manufacturers specifications
- 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 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
- Following the application of **HP 500 PW**, the lining should be left for at least 48 hours after which a thorough water wash down should be undertaken. Remove the wash water prior to filling with Potable water

Safety & handling

- All applicators of **HP 500 PW** 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

Technical services

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

Packaging

- **HP 500 PW** is supplied in 40 or 425 kg sets
  - Component A : 20 or 225 kg
  - Component B : 20 or 200 kg

Version 30012025

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