



DELTAShield PC 1200

HIGH PERFORMANCE PIPE COATING

DESCRIPTION

DELTAShield PC 1200 is a specially formulated high performance, steel pipe coating designed to provide superior corrosion, impact, abrasion and chemical resistance for both buried and above ground pipes.

DELTAShield PC 1200 exhibits exceptional adhesion and low moisture permeability making it suitable for use in immersion applications.

DELTAShield PC 1200 is spray applied and is tack free in seconds providing very rapid turn around and handling times.

TYPICAL USES

- ✓ Suitable for both Steel and GRP pipes
- ✓ External pipe coating for above ground pipelines.
- ✓ External pipe coating for submerged pipelines.
- ✓ External pipe coating for pipelines buried in aggressive and or wet soils.

FEATURES

- ✓ Extremely fast application in-house or in the field.
- ✓ Extremely fast cure resulting in reduced handling and re-use times.
- ✓ Excellent abrasion resistance.
- ✓ Excellent adhesion.
- ✓ Excellent impact resistance.
- ✓ Excellent chemical resistance.
- ✓ Very low moisture absorption.
- ✓ Stable over a wide temperature range





PRODUCT INFORMATION

PROCESSING PROPERTIES	DATA
Chemical base	Polyurethane / Polyurea hybrid technology
Mixing ratio of Comp. A to Comp. B	1 : 1 by volume
Viscosity (cps @ 25C)	A component: 450 ± 100 B component: 8000 ± 1000
Specific Gravity @ 25C	A component: 1.15 ± 0.02 B component: 1.45 ± 0.03
Tack Free-Time at 20°C [sec.]	60 - 90
Over coat cycle [h]	0 – 8 (without any pre-treatment)
Curing/loading after [h]	Walkable: 1 Mechanical: 2 Chemical: 12 - 24
Temperature range for application (ambient) [°C]	-10 - +60
Temperature range for application (substrate) [°C]	-5 - +75
Temperature range for service.	-40 - +90
Material Temperature (Preconditioning) [°C]	30° C - 40
Material Temperature (Spraying) [°C]	60 - 75
Maximal relative air humidity for application [%]	95
Pay attention to the dew point limit	Substrate should be 3C greater than DP (dew point)

PHYSICAL PROPERTIES	DATA	
VOC-content	DIN EN ISO 11890-1 / ASTM D-1259	0
Solids content	DIN EN 827 / ASTM D-2697	100
Tensile strength [MPa]	DIN ISO EN 572	45
Flexural Modulus (KPSI)	ASTM D-790	225 - 275
Elongation at break [%]	DIN ISO EN 572	6
Hardness [Shore D]	DIN ISO EN 572	70 ± 5





PHYSICAL PROPERTIES	DATA	
Impact resistance	EN 10290	23° C – 14 J/mm
Specific Electrical Insulation resistance.	EN 10290	23° C - 100 days >110 Ωm2 80° C - 30 days >108 Ωm2
Taber Abrasion [mg]	ASTM D-4060	< 110 (Wheel H18 / 1.000g / 1000 Cycles)
Adhesion - Pull off strength	EN 10290	23° C ≥ 14 mpa 70° C – 7 days – 5% NaCl ≥ 8 mpa
Cathodic Disbondment	ASTM G42	80° C (14 days): 6mm
Resistance to Root Penetration	EN 14416	Passed
Flexibility	EN 10290	Passed
Indentation Resistance	EN 10290	23° C < 0.15mm 80° C < 20%
Immersion in Sea Water – 90 days	Internal	80° C – 90 days PASS
Immersion in Sabkha – 90 days	Internal	80° C - 180 days PASS
Storage conditions [°C]	DIN EN 12701	10 – 30 (in closed original drums, stored at dry and well-ventilated place; beware of freezing)
Gouge test	CAN/CSA Z245.21-10	50 Kg, indentation 28 %
Gouge test	CAN/CSA Z245.21-10	70 Kg, indentation 50 %
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 PC 1200 is an aromatic based system and can display colour shift under UV light. This colour shift will not negatively affect the products physical performance.

* The data stated in this Technical Data Sheet is based on processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.





APPLICATION NOTES

- **DELTAShield PC 1200** can only be applied using high pressure heated plural component spray equipment by trained and approved applicators.
- In ambient temperatures below 20°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 70-75°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.
- It is important to ensure sufficient heat is maintained. Failure to maintain sufficient heat can compromise the mix and final physical properties of the coating.
- Hose heaters should be set at 70 - 75° C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.
- For best results ensure spray pressure (not static pressure) is a minimum of 200 bar (approximately 3000 psi)
- For full substrate preparation and / or repair procedures consult with your DELTA Coatings Technical representative.

SAFETY AND HANDLING

- All applicators of **DELTAShield PC 1200** should be trained and approved by the manufacturer.
- Spray applicators should wear appropriate PPE including approved breathing equipment, eye wear, Nylax 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.

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 201007

