

# DELTA Shield

## CRX 700



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

Two component spray applied high performance structural polymer

### Description

**CRX 700** is a specially formulated high performance, rigid polymer designed for in mold spray applications, mold making applications and the replacement of fiberglass reinforcing.

**CRX 700** exhibits excellent structural strength, good thermal stability and very low moisture permeability making it suitable for use in immersion applications.

**CRX 700** is spray applied and is tack free in seconds providing very rapid turn around and handling times.

### Features

- Extremely fast application
- Extremely fast cure
- Excellent abrasion resistance
- Excellent adhesion
- Excellent impact resistance
- Excellent chemical resistance
- Very low moisture absorption
- Stable over a wide temperature range

### Typical uses

- Fabrication of parts traditionally made from Fiberglass
- In mold spraying of components
- Structural support of flexible wear linings
- Structural support of vacuum formed components



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### Product information

Processing properties	Data		
Chemical base	Polyurethane / polyurea hybrid technology		
Mixing ratio A : B [by volume]	1: 1		
Dry film thickness range [mm] <small>(For project specific DFT recommendations consult with manufacturer)</small>	Steel	Minimum: 0.75	Maximum: indefinite
	Recommended	Minimum: 0.75 - 1	Maximum: unlimited
Tack Free-Time at 20° C [sec]	60 - 90		
Over coat cycle (without any pre-treatment) [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		
Material Temperature (Preconditioning) [° C]	30 – 40		
Material Temperature (Spraying) [° C]	65 – 75		
Maximal relative air humidity for application [%]	95		
Dew point limit	Substrate should be 3° C > dew point		
Storage conditions (closed original drums, dry & covered place) [° C]	10 – 40		
Shelf life (unopened and stored correctly) [year]	1		

- 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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Physical properties	Data	
VOC	ASTM D-1259	0%
Solids [%]	ASTM D-2697	100
Viscosity [mPa*s] @ 25° C	ASTM D-4878	Comp. A: 800 – 1000 Comp. B: 8000 – 10000
Density [g/cm³] @ 25° C	ASTM D-1217	Comp. A: 1.15 – 1.20 Comp. B: 1.40 – 1.50
Tensile strength [N/mm²]	ASTM D-638-22	≥ 45 ± 5
Flexural Strength [PSI]	ASTM D790	5000 - 6000
Elongation at break [%]	ASTM D-638-22	5 - 8
Hardness [Shore D]	ASTM D-2240-15(2021)	75 ± 5
Impact resistance [J/mm] @ 25° C	EN 10290	14
Specific electrical insulation resistance [Ωm²]	EN 10290	23° C – 100 days ≥ 110
		80° C – 30 days ≥ 108
Taber Abrasion [mg]	ASTM D-4060-19	< 110 (Wheel HS18 / 1000g / 1000 Cycles)
Pull off strength [N/mm²]	ASTM D-4541	23° C ≥ 14
		70° C – 7 days ≥ 8
Cathodic disbondment [mm]	ASTM G42	14 days @ 80° C : 6
Resistance to root penetration	EN 14416	Passed
Indentation resistance	EN 10290	23° C < 0.15 mm
		80° C < 20 %
Immersion in sea water [90 days @ 80° C ]	Internal	Passed
Gouge test	CAN/CSA Z245-21-10	50 kg, indentation 28 %
		70 kg, indentation 50 %

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### Application notes

- **CRX 700** should be applied in strict accordance with project specific application methodologies recommended by the manufacturer
- **CRX 700** 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 **CRX 700**, 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

### Safety & handling

- All applicators of **CRX 700** 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

- is supplied in 40 or 490 kg sets.
  - Component A : 20 or 210 kg
  - Component B : 20 or 280 kg



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.

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