

# X-Shield FS350WP

## Pure polyurea waterproofing membrane and protective coating

### Product Description

X-Shield FS350WP is a high elongation, elastomeric, chemically resistant waterproofing membrane and high performance protective coating manufactured using the latest polyurea technology.

### Composition

X-Shield FS350WP is a 100% solids (zero VOC), two component aromatic pure polyurea.

### Advantages

- Will bridge up to 3mm cracks
- UV resistant – no loss of properties when used in direct sunlight
- Chemical resistant – resists wide range of chemicals
- Fast setting – can be in service in 1 hour
- Environmentally friendly – zero VOC

### Uses

- Primary and secondary containment
- Protection of reinforced concrete structures
- Protection of steel structures
- High performance waterproofing applications

### Laboratory Test Data

Property	Typical Results	Test Method
Shore hardness	90 to 100°A	ASTM D2240
Density	1.02 ± 0.3	IHM
Tensile strength	23MPa	ASTM D638
Elongation	>350%	ASTM D638

The above results were obtained on 7 day old samples cured at 95F (35C), applied at 160F (71C) and a spray pressure of 1800psi.

X-Shield FS330WP has also been tested for abrasion resistance, puncture resistance, tear strength, moisture vapor transmission, flexibility and weathering.

### Chemical Resistance

Test method ASTM D 3912 (12 month exposure)

Gasoline	Slight surface change, no hardness loss
Diesel Fuel	No visible damage
H <sub>2</sub> SO <sub>4</sub> (20%)	Slight surface change, no hardness loss
HCl (10%)	No visible damage
NaOH (50%)	Slight surface discoloring, no hardness loss
Acetic Acid (10%)	No visible damage

### Application Properties

Application temperature	-10 to 120F (-23 to 49C)
Service temperature	-40 to 300F (-40 to 149C)
Ratio by volume	1:1
Spray pressure	1800psi (125 bar)
Gel time	10 seconds
Tack free time (walkable)	2 minutes
Metering equipment	Plural
Spray gun type	Impingement

### Recommended Thickness

Immersed applications	60 to 120mils (1.5 to 3mm)
Steel	40 to 60mils (1 to 1.5mm)
Concrete	40 to 80mils (1.0 to 2.0mm)
Geotextile	60 to 120mils (1.5 to 3.0mm)

### Specification Clause

The waterproof protective coating shall be a pure polyurea coating as defined by the Polyurea Development Association and the National Association of Corrosion Engineers (NACE, 6A198). It will have an elongation of >350% and tensile strength of 1800psi as per ASTM D412. When fully cured it will be able to bridge a 1/8" crack at a coating thickness of 80mils as per ASTM C836. After 7000 hrs of ASTM G53 QUV weathering the coating will exhibit no signs of cracking. The coating will be applied by a contractor using trained

personnel and the correct equipment as recommended by the supplier. The coating will be applied strictly in accordance with the method statement prepared by the supplier.

### Color

Translucent beige.

### Coverage

25ft<sup>2</sup> per gallon at 60mils thickness (0.66m<sup>2</sup> per liter at 1.5mm).

### Packaging

400L or 100USG sets.

### Shelf Life

24 months when stored unopened between 60 and 90F (15 and 32C) under shade in a dry environment.

### Installation Guidelines

X-Shield FS350WP can only be applied by an X-Calibur Registered Contractor using trained personnel and the correct equipment. X-Calibur does not allow any contractor on to the register unless they satisfy strict selection criteria. For each application X-Calibur will provide a detailed method statement that the Registered Contractor will work to.

### Limitations

X-Shield FS350WP is UV resistant but not color stable. It may discolor and lose its gloss without loss of physical properties.

Do not apply in rain or wet conditions, at temperatures below -20F (-29C), above 120F (49C) or within 5F (3C) of the dew point.

Do not store below 60F (15C) or above 90F (32C).

Apply only on to the surface of exposed ground slabs that have a waterproofing system installed under the slab in order to prevent blistering due to osmosis

### Health and Safety

**This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website [www.ncc.com.eg](http://www.ncc.com.eg)**

### Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists ('ATSS') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit [www.ncc.com.eg](http://www.ncc.com.eg) for a full list of NCC X-Calibur ATSS.

### Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on [www.ncc.com.eg](http://www.ncc.com.eg) to ensure you have the latest version.

### Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of these products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemistry Inc.

**makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** NCC X-Calibur Construction Chemistry Inc. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.



Quality Statement  
All Products manufactured by NCC X-CALIBUR or imported from X-CALIBUR companies world-wide are manufactured to procedures certified to conform the quality, environment, systems described in the ISO 14001:2004 , ISO 9001:2000.



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