

## Technical Data Sheet

# X-Shield EpoxySeal CR

## Chemical resistant high build epoxy coating

### Product Description

X-Shield EpoxySeal CR is a high performance, solvent free epoxy protective coating suitable for use in a wide range of applications. X-Shield EpoxyLock MT version is available for use in tidal conditions and at low ambient temperatures.

A high build (HB) version is available that can be applied up to 1000 microns per coat.

A trowel grade (TF) grade is available for application as a liner coating from 2mm to 5mm in a single application.

### Composition

X-Shield EpoxySeal CR is a solvent free epoxy resin containing acid resistant fillers and wetting agents.

### Advantages

- Meets SCAQMD Rule 1113 & LEED VOC Limits
- Formaldehyde free
- Can be applied to steel and concrete
- High abrasion resistance
- Primerless
- Resistant to wide range of chemicals
- Waterproof
- Better UV resistance than most epoxy coatings
- Zero VOC

### Typical Uses

- Protection of concrete structures
- Waste water plants and structures
- Wall and floor coating for industrial facilities
- Protection of marine structures

### Chemical Resistance

X-Shield EpoxySeal CR has excellent resistance to the following:

1% Lactic Acid  
25% Sodium Hydroxide  
20% Hydrochloric Acid  
25% Sulphuric Acid  
Kerosene  
Petrol  
Chlorinated Water  
Distilled Water  
Ferric Chloride  
Aluminum Sulfate  
Raw Sewerage  
Treated Effluent

### Application Properties

Property	Typical Results
Dry film thickness	300 microns [2 coats] (HB) version 1000 microns [single coat]
Volume solids	100%
Application temperature	5 to 45C
Pot life	60min at 20C 25min at 35C
Recoat time	12 to 24h at 20C 4 to 12h at 35C
Full cure	7d at 20C 5d at 35C

### Specification Compliance

SCAQMD Rule 1113  
LEED NC2009 IEQ 4.2

### Volatile Organic Content

VOC = <50g/L

### Color

Grey.

### Theoretical Coverage

6.6m<sup>2</sup> per liter (264ft<sup>2</sup> per gallon) per coat.  
Actual coverage will depend on wastage and surface profile and can be up to 20% higher than theoretical coverage.

### Packaging

4 and 15 liter packs.

### Shelf Life

18 months when stored below 35C under shade in a dry environment.

### Installation Guidelines

X-Shield EpoxySeal CR should be applied by experienced coating crews. NCC X-Calibur provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting

work. The information below is a summary intended for guidance only.

### **Surface Preparation**

#### **Concrete**

The substrate must be structurally sound. Loose or unsound concrete should be removed and made good. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. The surface should be prepared by light grit blasting or high pressure water blasting to produce a lightly exposed aggregate surface. Any bug holes should be filled with an X-Shield BugFill.

#### **Steel**

Any damaged steel should be removed and replaced. The substrate should then be grit blasted to minimum SA 2½. Depending on the level of corrosion protection required, an anti-corrosion or holding primer may be necessary. X-Shield EpoxySeal CR must be applied immediately after the grit blasting has been completed. Any imperfections should be filled with an X-Shield BugFill.

#### **Priming**

A primer is not normally required. If the substrate is very porous then prime with X-Shield SF Primer. If the substrate has an internal relative humidity of 80% or higher then prime with X-Shield MT Primer.

#### **Mixing**

Add the hardener into the base and mix using a slow speed drill (500 rpm) with an X-Shield Coating Mixer Paddle for 3 minutes or until both components have fully dispersed and are uniform in color. Be sure to rotate the mixer throughout the drum. Mix only full packs.

#### **Application**

Apply in two coats of 150 micron wet film thickness using brush or roller. The first coat should be applied in such a manner as to ensure a good bond. Allow first coat to dry for at least 12 hours at 20C or 4 hours at 35C. For application by airless spray consult NCC X-Calibur before use. Clean equipment using X-Shield Solvent S.

#### **UV Resistance**

X-Shield EpoxySeal CR is resistant to ultra violet radiation from direct sunlight and will maintain its chemical and physical properties. As is typical with all epoxy coatings, the color will change slightly on exposure to sunlight.. When no color change is acceptable, the product should be over-coated with a suitable aliphatic coating.

### **Limitations**

Will not accommodate movement cracks.  
Do not be apply within 3C of the dewpoint or if it is within 5C of the dewpoint and dropping.  
Avoid excessive application.  
Avoid skin contact.  
Do not discard into the water system.  
Protect from chemical and water spillage until fully cured.

### **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 ('ATs') 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 ATs.

### **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 the 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 Chemicals **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 Chemicals shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.