

X-Shield FlexCoat One

Polymer modified cement waterproofing for concrete

Product Description

X-Shield FlexCoat One is a polymer enhanced cement coating used for waterproofing, resurfacing and concrete protection.

Composition

X-Shield FlexCoat One is a single component cementitious coating manufactured using selected cements, fillers and dry polymer.

Advantages

- Meets SCAQMD Rule 1113 & LEED VOC Limits
- Formaldehyde free
- APEO free
- Resists strong hydrostatic pressure
- Resists back pressure
- Can be used above and below grade
- Breathable
- Can be applied to one day old concrete
- Can be used in contact with potable water
- Withstands light foot traffic.

Uses

- Wet area waterproofing
- Horizontal and vertical concrete and masonry
- Potable water tank coating
- Sea walls
- Basements
- Resurfacing

Specification Compliance

ANSI/NSF Standard 61
SCAQMD Rule 1113
LEED NC2009 IEQ 4.2
ANSI A118.10
BS 6920

Volatile Organic Content

VOC = <50 g/L

Color

Grey and white.

Theoretical Coverage

15m² per bag per 1mm thickness.

Yield

14.5 to 15 liters per bag.

Packaging

25kg bag.

Shelf Life

12 months when stored below 35°C (95°F) under shade in a dry environment.

Laboratory Test Data

Property	Typical Results
Compressive strength	>40MPa
Flexural strength	>10MPa
Tensile strength	>2MPa
Bond to 40MPa concrete	>2MPa
Water vapour transmission	3.7 perms
Water permeability	Nil
Shrinkage	0.014%
Bond/Adhesion	>1MPa
Reduction in chloride ion permeability	98%
Carbon dioxide permeability	>200m ^{air}
Oxygen diffusion	< 5 x 10 ⁻⁵ cm ² /second

The above data relates to X-Shield FlexCoat One after 28 days curing with a water powder ratio of 0.2.

Installation Guidelines

X-Shield FlexCoat One should be applied by experienced applicators. 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

The substrate must be structurally sound. Loose or un-sound 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 or static cracks below 2mm should be filled with X-Shield FlexCoat One, to produced in a paste that can easily be applied using the 'scrape on, scrape off' technique with a steel scraper or steel trowel. Larger cracks or cracks liable to move should be identified and the coating reinforced with X-Shield Reinforcing Fabric. Corners and penetrations should also reinforced. Construction and movement joints should be continued through the coating using an appropriate joint detail and sealant.

The surface should be primed using water to achieve a saturated surface dry (SSD) surface prior to application of X-Shield FlexCoat One.

Mixing

X-Shield FlexCoat One is supplied as a one component pack. Use 5 to 6.25 liters of water per bag. Mix only as much material as can be used in 30/60 minute. X-Shield Flex Coat one should be mechanically mixed with clean cool water to a consistency of thick oil paint completely free of lumps. Separate containers (equal volume) should be used for measuring the powder and water. If "false setting" occurs after mixing do not add water, just stir again to restore workability. Mix for approximately 3 minutes until a lump-free creamy consistency is achieved. Mix only sufficient material for application within 45 minutes.

Application

Apply using brush, roller squeegee, trowel or hopper spray. Apply subsequent coats once the coat beneath has dried. The coating can be reinforced using X-Pruf Roof Scrim in areas subject to large temperature movements such as roofs.

Limitations

Temperature of the mixed coating should be less than 30°C (86°F) at time of mixing.
Do not apply to substrates that have free water on them.
Do not water test until the coating has cured for 7 days.
Do not immerse until the coating has cured for 7 days.
Not suitable for use with acids.
Do not apply below 5°C (41°F).
Avoid excessive application.
Avoid skin contact.
Maximum application thickness 6mm per coat.
Do not discard into the water system.
Apply only on to slabs that have a waterproofing system installed in order to prevent blistering due to osmosis.

Health and Safety

This product is for industrial use only by trained operatives. 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

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 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 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.