

Technical Datasheet

X-Pruf CrystalCoat

Cementitious crystalline waterproof coating for concrete.

Product Description

X-Pruf CrystalCoat is a one component, crystalline cementitious waterproofing that penetrates new and old concrete to resist hydrostatic pressure.

Composition

X-Pruf CrystalCoat consist of active, non-soluble, non-toxic, waterproof chemicals contained in a cementitious carrier that crystallizes in the presence of water and free lime in the concrete.

Advantages

- Penetrates concrete, seals capillaries and hairline cracks
- Withstands positive and negative hydrostatic pressure
- Suitable for use with potable water
- Easy to apply
- Can be used on damp concrete
- Crystals continue to grow until cracks are sealed
- Chloride free
- Allows concrete to breath
- No odor

Typical Uses

- Concrete and block substrates
- Above or below ground structures
- Potable water tanks
- Wastewater structures
- Basements
- Elevator pits
- Tunnels
- Interior and exterior waterproofing

Laboratory Test Data

Property	Typical Results
Nature	Powder
Color	Grey & white
Paste specific gravity	1.60 ± 0.05 g/cm ³
Compressive Strength (ASTM C109)	30 MPa

Specification Compliance

BS 6920

Application Properties

Pot life:	30 - 60 minute depend on nature and temperature
Setting time:	6 hours at 25C

Volatile Organic Content

VOC = 0 g/L

Coverage

0.8 – 1 kg per m² per coat.

surface nature, water rate, thickness and wastage of technical

Packaging

20kg bags.

Shelf Life

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

Installation Guidelines

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 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, high pressure water blasting or acid etching (15% muriatic acid) to produce a lightly exposed aggregate surface. If acid etching must be used, follow recommendations and procedures in ASTM D4260 and ASTM D4262. Surfaces must be damp prior to the application of X-Pruf CrystalCoat. Rout out construction joints, cold joint edges and non-leaking cracks greater than 0.4mm wide to a minimum 25 by 25mm in sound concrete. Routing should create a "U" shape.

Saturate routed area with water and make good with a repair mortar such as X-Pruf CrystalPatch, X-Roc StrongPatch or X-Roc UltraPatch. Rout leaking cracks to 25mm wide by 35 to 50mm deep in sound concrete. Saturate routed area with water and stop water by using X-Roc WaterPlug. Then make good with X-Roc CrystalPatch, X-Roc StrongPatch or X-Roc UltraPatch.

Mixing

Use **10** to **10.5** liters of water per bag. Mix only as much material as can be used in 30 – 60 minute. X-Pruf CrystalCoat 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.

Application Slurry Coat

X-Pruf CrystalCoat may be applied as a slurry coat using a brush (synthetic bristle), broom or plaster spray at a rate of 0.9 kg/m² per coat. Work slurry well into openings, rough surfaces, joints and routed out areas. Apply second coat (when required) after first coat has reached initial set, usually within 6 hour. If the first coat has dried out, moisten surface before applying second coat.

Dry Shake

X-Pruf CrystalCoat can be applied as a dry shake direct from the bag on freshly poured concrete. Wearing rubber gloves, distribute the powder evenly by hand over freshly poured concrete at 1.2 to 1.5kg/m² before the final floating operation. Two applications are recommended to obtain stated physical properties. Distribute the powder at one-half at a right angle to the first application. Spread as close to the surface as possible to prevent material from blowing away. For large areas, a rotary type spreader may be used. Float slab and trowel to final finish.

Curing

X-Pruf CrystalCoat must remain moist to allow the crystals to form. All X-Pruf CrystalCoat applications must be kept moist for a minimum of 48 hours. After initial setting, moist cure X-Pruf CrystalCoat using water spray. Fog spray the treated surface 3 to 4 times daily for a minimum of 48 hours (up to 14 days will give the best performance). In warmer climates, more frequent spraying may be required. Protect freshly applied X-Pruf CrystalCoat from extreme weather conditions, such as rain, strong winds, high temperatures and freezing for a period of not less than 48 hours after application.

Clean Up

Before setting, X-Pruf CrystalCoat may be cleaned from tools and other surfaces with water. Cured material must be removed mechanically.

Limitations

Add only clean potable water to X-Pruf CrystalCoat. Topcoats, renders and tile adhesives cannot be applied over X-Pruf CrystalCoat. Do not apply at temperatures below 4C. Full activation and effectiveness may take 2 to 3 weeks after application. Protect surfaces from foot traffic for 48 hours or heavy traffic for 7 days.

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

Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists ('ATsSO 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

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