

## CRYST ROOF®

Article-No.: 05300

### 2K HIGH FLEXIBILITY WATERPROOFING ROOF COAT

#### DESCRIPTION

CRYST ROOF® is a two-component, highly flexible, sealing coat with a very high special polymers content that penetrates into the pores of the substrate and seals it permanently to provide a flexible waterproofing of roof buildings. CRYST ROOF® consists of a cementitious powder component (component A) and low viscous rubber dispersion (component B). These two components chemically react when mixed to produce a firm, yet still highly flexible coating that can be simply applied by stiff brush, roller, spray or trowel to obtain the desired texture. It presents excellent bonding and elongation characteristics, which makes it an ideal solution for surface waterproofing under temperature variations, crack bearing, and moving surfaces.

#### FEATURE AND BENEFITS

- Environmentally friendly.
- Ideal for waterproofing, UV rays stable, and external conditions resistant.
- save energy costs by reflecting sun rays and heat away from the building.
- Suitable to be coated over leaking finished roofs.
- Self priming, non-toxic, and non flammable.
- Seamless and jointless coating when applied continuously.
- High durability to long term weathering effect.
- High adhesion on many substrates including concrete, cement mortars, and screeds properties.
- One-component product, only water needs to be added.
- Excellent elongation and crack bridging properties.
- Excellent abrasion resistance and mechanical.

#### FIELD OF APPLICATION

- Uses for all types of waterproofing and protective coating for roofs, terraces, and balconies.
- Waterproofing and protective coating for most building substrates such as concrete, cement screeds, brick, plastering, tiles, PU foam, and primed steel.
- Decorative overlay and over existing terrazzo tiles.
- Waterproofing of corrugated sheets and sloped roofs.

#### MATERIAL PROPERTIES

Form:	powder
Appearance:	light grey / white
Mixed density:	approx. 1.70 g/cm <sup>3</sup>
Application temperature:	+8°C up to +40°C
Pot life (30°C):	approx. 45 minutes, depend on temperature
Odour:	Low - Characterised as polymeric

#### TECHNICAL DATA

Tensile strength:	≥ 6.0 N/mm <sup>2</sup>
Ultimate elongation%:	> 80%
CO <sub>2</sub> Sd-value (2 mm dry film thickness):	> 200 m
Tensile elongation in accordance with ASTM D 412-16:	approx. 250 %
Crack bridging ability:	≥ 2.8 mm
Adhesion strength:	> 2.0 N/mm <sup>2</sup> at 28 day
Abrasion Resistance:	>180 mg

Compressive strength:	≥ 8.0 N/mm <sup>2</sup>
Full curing time:	7 - 10 days
Toxicity:	Non Toxic
Reaction to fire:	Euro, class E
Time between re-coat:	approx. 1.5 to 4 hrs. depending on climate conditions
Coverage rate at 1 mm wet	
Coat thickness:	17-20 m <sup>2</sup> per 30 kg set
Root Resistance:	No punctures, tested with Lupinus albus

## DIRECTION FOR USE

### Surface preparation:

The surface must be mineral, dry, or light humid, sound, and clean. Bonding inhibiting agents such as grease, oil, formwork oil, and all loose particles and dust must be removed before the application of CRYST ROOF®. The damaged area like cracks, holes have to be chased out, and filled with CRYST MORTAR. The small voids can be repaired with CRYST ROOF® with adjustable Component B (reduce the Component B to be thick slurry).

### Product mixing:

Add Component B into a clean mixing bucket and mechanically stir drill mixer slowly and mix in as much Component A until a lump free, homogenous mass with either a slurry or sprayable consistency is achieved. If the mixture starts to set, do not add more water; simply re-stir to restore workability. Only mix as much material as can be used within 45 minutes. Allow to stand for at least 3 minutes then briefly remix.

### Mixing ratios:

Mix 20 Kg of CRYST ROOF® Component A to 10 liters of CRYST ROOF® Component B.

### Application:

Dampen surface with clean water prior to product application. Uniformly apply the first coat with a short bristle brush or roller, making sure to fill in all surface pores and voids. For maximum waterproofing performance, apply a second coat after first coat has dried for 2 hours. The maximum recommended thickness for these methods of application is 1 mm per layer in at least 2–3 layers, to a total thickness of at least 2 mm. For high pressure of water should be apply 3 layers in total thickness 3 mm.

**Brush application:** Apply CRYST ROOF® In 2 directions (diagonally opposite / crosswise).

**Roller application:** Apply CRYST ROOF® exerting good and even pressure onto the substrate.

**Trowel application:** apply CRYST ROOF® by trowel in at least 2 layers, to a total thickness of at least 2 mm.

**Spray application:** CRYST ROOF® can be applied with suitable spray equipment than dependent on the exposure conditions, spray apply one or two coats in a circular movement.

### Application rates:

**Vertical & Horizontal surfaces:** CRYST ROOF® at approx. 1.75 kg/m<sup>2</sup>per coat (1mm thickness) applied by roller, brush or spray.

**Construction joints:** CRYST ROOF® at (2.25 kg/m<sup>2</sup>) per coat applied by brush in concrete Joints, pipes or anywhere else in the structure must also be sealed and made watertight.

### NOTES:

- Do not Apply CRYST ROOF® for thick coatings (more than 2 mm per coat).
- At right angles, pipe penetrations, drainages, it is recommended to embed a fiber mesh sandwich between the coatings.
- Allow at least 48 hours to cure before subjecting to foot traffic.
- Do not add more water to the mix.

- Layer Thickness Minimum 1 mm with constant thickness, applied in minimum 2 layers (maximum recommended thickness per layer is 1 mm)
- Protect from rain for at least 24–48 h after application.
- Clean all tools immediately with water after use.
- To fully activate the material may require 7-10 days.
- Store in a dry environment.
- For more detailed instructions, or information concerning the compatibility of the CRYSTARM® application contact the CRYSTARM® Technical Department or your local CRYSTARM® representative

## RECOMMENDED TOOLS

Brush, roller, gloves, safety glasses, and stirring mixing machine.

## PACKAGING

CRYST ROOF® is available in:

Component A: 20 kg bags or pails.

Component B: 10 l gallon

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## STORAGE & SHELF LIFE

Keep CRYSTARM products must be stored dry and at a temperature of no less than 45°F (7°C). 15 months is the maximum shelf life when stored under proper conditions in original unopened packaging.

## SAFETY HANDLING

CRYST ROOF® is made of Portland cement and silica sand may irritate your eyes and skin. Take adequate precautions, such as wearing protective gloves and using breathing apparatus if applied in enclosed environments. If contact is made, flush areas with lots of water. For further information please refer to Safety Data Sheet. KEEP OUT OF REACH OF CHILDREN.

## CRYSTARM®

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**WARRANTY:** The Manufacturer warrants that the products manufactured by it conform to the formulation standards contained in all components in their proper proportion and are free from material defects. If any of the products are found to be defective the subsequent liability to The Manufacturer shall be limited only to the replacement of the product proven to be defective and shall not be liable for any other claim or for incidental or any consequential damages that may arise directly or indirectly with the said defective product. The user shall determine the suitability of the product for its intended use and the user assumes all liability in connection therein and the manufacturer shall not be liable save for terms of this warranty.