

CRYST MORTAR®

Article-No.: 07100

WATERPROOFING MORTAR BY CRYSTALLIZATION TECHNOLOGY

DESCRIPTION

CRYST MORTAR® is a high-strength concrete replacement mortar that is impermeable to pressurized water by crystalline waterproofing technology which is used to repair damaged areas of concrete, cracks, joints, tie holes, and honeycombed areas. CRYST MORTAR® contains active materials to protect concrete against water, chloride, sulfate ingress, and any other chemical attack.

FEATURE AND BENEFITS

- Environmentally friendly.
- Ready mix dry mortar.
- Suitable for internal and external applications.
- High-strength fine structure repair mortar.
- Resist hydrostatic pressure from either positive or negative surface of the concrete.
- Resistance to chemical attack.
- Protects reinforcing steel against corrosion.
- Active crystallization to seal cracks up to 0.5mm wide.
- Ideal for vertical and overhead concrete repairs.
- Can be skim coated or feather-edged.
- Non-toxic – ideal for potable water.
- Fast setting.
- Breathable, compatible with host concrete.
- Non-shrink and crack resistant.
- A single component that is easy to use needs only to be mixed with water before application.

FIELD OF APPLICATION

Used for repairing concrete structures, cracks, construction joints, tie holes, honeycombed concrete, large-scale repairs, masonry repairs, voids greater than 100 mm deep, and other defects in concrete.

MATERIAL PROPERTIES

Form:	powder
Appearance:	grey
Bulk Density:	approx. 1.6 g/cm ³
Application temperature :	+8°C up to +40°C

TECHNICAL DATA

Compressive strength:	28 days	58 N/mm ²
Tensile strength:	28 days	7 N/mm ²
Flexural strength:	28 days	10 N/mm ²
Water permeability:		< 5 mm
Rapid chloride permeability:		< 500 columns
Processing time:		approx. 20 minutes, depend on temperature
Pot life (30°C):		approx. 45 minutes, depend on temperature
Consumption:		approx. 1.6 kg/l

DIRECTION FOR USE

Surface preparation:

All surface to be patched, repaired or sealed with CRYST MORTAR® must be solid, stable, and clean from adhesion inhibiting substances such as separating agents, dust, oil, grease, gypsum or bitumen must be removed before the application. Additionally, the surface must be humid (if necessary pre-wet the surface), but no standing water. Cracks should be routed out to a U-shaped configuration, approximately 2 CM wide and a minimum of 2.5 CM deep. Tie holes should be roughened prior to filling. Spalled and honeycombed areas must be thoroughly cleaned and chiseled back to sound concrete prior to repair. Remove all dirt, cement laitance, form release agents, curing compounds, paints, coatings, etc. by means of dry sandblasting, high-pressure water jet, or other suitable mechanical means. Surfaces must be well moistened to a dull dampness at the time of application. The concrete should be damp with no wet sheen on the surface.

Product mixing:

Dependent on the desired consistency, place approx. 3.5 liters per 20 kg of clean water into a clean mixing bucket and whilst continuously mechanically stirring mixing drill, mix in as much dry mortar until a lump-free, non-slump, smooth mortar paste is achieved. The mixing time is approx. 2–3 minutes. Mix only as much material as can be used within 20 minutes. Allow standing for 5 minutes then mix through once again. Application of the mortar is carried out to the technical regulations for plastering.

Application:

After proper surface preparation and routing to appropriate configuration, fill cavity flush to surface with CRYST MORTAR® in mortar consistency.

Application rates:

Surface levelling: approx. 1.5 kg/m²/mm thickness ·

Coved fillets: approx. 3.0 kg/m

Recommended single application:

Minimum applied thickness:	10 mm
Overhead sections:	up to 50 mm thick
Vertical sections:	up to 75 mm thick
Small pockets or horizontal:	up to 100 mm thick
Maximum length:	up to 3 m

NOTE:

- All applications of CRYST COAT® should be applied as a surface treatment as soon as CRYST MORTAR® has set (approximately 1-2 hours). If this is not practical, leave surface rough for subsequent surface treatment to bond.
- Provide protection against extreme weather conditions, such as heavy rain or freezing conditions, during the setting period. Curing is not normally required except during hot, low humidity weather. In these conditions, a light mist of water approximately 24 hours after the repair is completed will help to ensure a controlled cure. In extreme dry heat, water misting may be required more frequently.
- DO NOT the Application at temperatures below 8°C, to a frozen substrate or if temperatures will drop below freezing during the curing period (approximately 24 hours).
- 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

Trowel, Spatula, Gloves, and Safety glasses, stirring mixing machine.

PACKAGING

CRYST MORTAR® is available in 20 kg bags or pails.

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). one year is the maximum shelf life when stored under proper conditions in original unopened packaging

SAFETY HANDLING

CRYST MORTAR® 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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CRYSTARM®

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EN 1504-3: ZA. 1a

CRYST MORTAR

for structural and non-structural concrete repair mortar
EN 934-2:T9

Compressive strength	Class R4 (≥ 45 Mpa)
Chloride ion content	≤0,05%
Adhesive bond:	Class R4 ≥ 2.0 MPa
Restrained shrinkage/expansion	NPD
Elastic modulus:	NPD
Carbonation resistance	NPD
Thermal compatibility	NPD
Reaction to fire:	Class A1
Coefficient of thermal expansion	NPD
Release of dangerous substances	NPD
Capillary water absorption and water permeability:	≤0,5 kg/m ² x h ^{0,5}

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.