



Dr. Fixit Krystalline

CRYSTALLINE WATERPROOFING FOR CONCRETE SUBSTRATES

Description:

Dr. Fixit Krystalline is a cementitious, brush applied, waterproofing treatment for concrete. When it is mixed with water & applied to concrete, it penetrates into the concrete mass protecting against the passage of water.

Dr. Fixit Krystalline reacts chemically to form billions of needles like crystals which block the pores, voids & micro cracks in concrete. Pre saturation & subsequent re-wetting of the surface will cause deeper diffusion of the organic chemicals & formation of crystals at greater depth. It may take from seven days to one month to reach its maximum waterproofing capability, depending on the thickness of concrete. Environmental factors such as ambient temperature, density of concrete, moisture present & weather conditions all can affect the timing of sealing process. Under dry conditions,

Dr. Fixit Krystalline lies dormant. However it becomes reactive whenever it is re-exposed to moisture.

Dr. Fixit Krystalline contains active waterproofing chemicals which react with moisture and anhydrates cement in the concrete, creating insoluble crystalline complexes which seal the capillaries and minor shrinkage cracks. They penetrate even against strong hydrostatic pressure, becoming an integral part of the concrete. The waterproofing chemicals remain active for the life of the structure, permanently sealing it from water penetration.

Area of Application

- Water retaining Structures.
- Basements, Foundations.
- Swimming pool.
- Bridge Decks.
- Dams.
- Concrete Pipes, Canals, Tunnels.
- Water Excluding Structures.
- Lift shafts, Inspection Pits.
- Construction Joints.
- Harbors, Jetties.
- Sea defense walls, Retaining walls.

Features & Benefits

- Stops water movement through concrete.
- Protects reinforcing steel against corrosion.
- Waterproofs minor cracking & seals shrinkage cracks up to 0.4 mm width.
- Its waterproofing capability increases with time. i.e. It remains permanently active.
- Does not get affected by surface wear or abrasion.
- Can be applied to positive or negative side of concrete.
- Treated concrete withstands hydrostatic pressure up to 150 meter head.
- Easy in application, only mix water at site.
- Protects concrete against contaminated water & corrosion.
- Applicable on moist substrates.
- It allows concrete to breathe, but is not a vapors barrier.
- Waterproofs by deep crystallization, where slabs or concrete rafts / PCC are to be landscaped.

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Method of Application

- **Dry shake application** : on fresh concrete floors, slabs and horizontal surfaces
- After fresh concrete is placed, consolidated and leveled, wait until concrete hard enough to walk on, and leaving only 6-10 mm. foot print. concrete should be free from bleeding water.
- Broadcast 1 kg. of **Dr. Fixit Krystalline** by hand or rotary spreader before final trowelling work.
- Recommend to broadcast as two application, first 50% in one direction, last 50% at the right angle.
- After **Dr. Fixit Krystalline** powder has absorbed moisture from slab, then start power floated.
- Only sprinkle water for initial curing. 48 hours later, ponding for regular curing can be done.

1. Surface preparation for existing concrete substrates

- Surface should be sound, clean and free from dirt, laitance, loose particles, paints, etc., Remove by mechanical grinding, sandblasting, or high pressure washer cleaning, or suitable mechanical means.
- Remove all protrusions, chisel out honeycombed/damaged areas, repair the cracks and work back to sound concrete.
- Stop active water leakages using Dr. Fixit Instant Leak Plug, for severe infiltration.
- All crack and holes should be filled with **Dr. Fixit Krystalline** 7 parts mix with 1 part of water.
- Substrate should be reach a "saturated surface dry" (SSD) condition (damp, without standing water)

2. Product preparation:

- Mix **Dr. Fixit Krystalline** powder to water in ratio

Dr. Fixit Krystalline 100g per Water 40 g (2.5:1) for waterproofing purpose.

- Always mix powder to water and stir it well to obtain a lump free mixture. Mix only quantities to be used within 30 minutes. Mix **Dr. Fixit Krystalline** mechanically with clean water to a thick consistency.

3. Application

- Apply mixed of **Dr. Fixit Krystalline** with a trowel or brush, in rate of 0.6 - 0.7 kg./m²/coat
- Apply a second coat after 3 to 6 hours. at the right angles of the first coat.
- **Curing**
- **Dr. Fixit Krystalline** shall be moisture cure for minimum 2-3 days & protected from rain & direct sunlight or light traffic for minimum 2 days after application
- Heavy traffic should be avoided until the surface has hardened, at least 5 days after application.
- Back filling can be carried out after 36 hours of application of **Dr. Fixit Krystalline** (Backfill material shall be moist & not contain rocks or large aggregates.)
- Water retaining structures, can be carefully filled with water 7 days after application.
- Potable water tanks should be thoroughly rinsed with potable water prior to being placed inservice.

Precautions & Limitation

- Application can be done under normal temperature conditions.
- Heavy traffic should be avoided until the surface is hardened for at least 5 days.
- Finishes containing portland cement may be applied over **Dr. Fixit Krystalline** after 3 to 4 days.
- Any paint or coating should be applied after 28 days only, over **Dr. Fixit Krystalline** application, after thorough wire brushing, washing & removing any **Dr. Fixit Krystalline** residual on surface.
- **Dr. Fixit Krystalline** has a high pH, when mixed with water. Use protective gloves and clothing & goggles for eye protection.
- Not recommended over moving joints and structures subjected to movements.
- Do not apply on dry substrate..

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Technical Information

Properties	Standard/Test method	Test result
1. Colour		Grey Powder
2. Bulk Density		1.25
3. Water Pressure Head		Up to 150 m head
4. pH when mixed with water		11 ± 1
5. Depth of Penetration of water	BS EN 12390-8:2009	32.61 %
6. Particle size		40-150 microns

Coverage

- Brush application 1.3 kg./m²
- Dry shaked application 1 kg./m²

Packaging

- Dr.Fixit Krystalline 20 kg./bag

Storage

- 12 month storage in sealed container and room temperature

Health & Safety Precautions

- Non Flammable.
- Avoid contact with skin and eyes.
- Wear protective gloves and eye protection when applied.



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