

Crystallization cementitious waterproofing

PRODUCT

weberdry crystal is mono-component crystalline waterproofing product composed of special cement, proprietary blends of chemicals and sands that, when mixed with water and applied, penetrates into concrete and concrete unit masonry and reacts chemically with the by products of cement hydration in the presence of water to develop crystalline growth within substrate capillaries to produce an impervious, dense, waterproof substrate

Mechanism of action

The chemicals contained in the crystalline waterproofing materials require the presence of moisture to set off a chemical reaction from within the matrix of the concrete. When combined with "free lime", these chemicals form long chained complexes, which crystallize and penetrate deep into the capillaries of the concrete eliminating the migration of water.

The crystalline process is continuous as long as moisture is present in the concrete, significantly reducing the concrete's natural porosity by filling small voids and cracks caused by shrinkage. The concrete is still able to breathe as the crystalline does not create a vapor barrier. If no moisture is present, the crystals will lie dormant until moisture reappears and then will reactivate to seal the cause of the leakage.

ADVANTAGES

- Prevents surface problems, e.g. fungus growth, cracking, and able to withstand positive and negative water pressure.
- Repair and rehabilitate old and problematic concrete by sealing off hairline cracks.
- Removes moisture in concrete by reacting with it, thus reducing or eliminating corrosion of reinforcing steel in the concrete.
- Easy application and suitable for various construction structures and sites
- No special protective system is required.
- **weberdry crystal** penetrates deeply and seals concrete capillary tracts or shrinkage cracks up to 1mm.
- Can be applied from positive or negative side. It can be applied to moist or concrete that has set but yet to be hardened.
- Increase resistance to frost, weathering, salt water, aggressive ground water and many chemicals.
- **weberdry crystal** permits the concrete to breath, eliminating water vapour from building-up thus leaving the concrete completely dry.
- **weberdry crystal** is non-toxic
- Permanently active (in depth).
- Non-flammable.



PACKAGING

Leb	Syria	Jordan	UAE	Qatar	Kuwait	KSA	Oman
25 kg	25 kg	25 kg	25 kg	25 kg	25 kg	25 kg	25 kg

- One component (add water only).
- Inorganic & environment friendly.
- Un-reacted chemicals remain active and will react in contact with water providing additional protection against leakage.

SCOPE OF USE

- Water tanks
- Sewage
- Tank
- Swimming pools
- Tunnels
- Retaining Walls
- Lift pits
- Balconies
- Fish Ponds
- Concrete slab
- Planter box
- Water treatment structures
- Wet areas-toilet & bathroom
- Underground shafts
- Foundations & basements

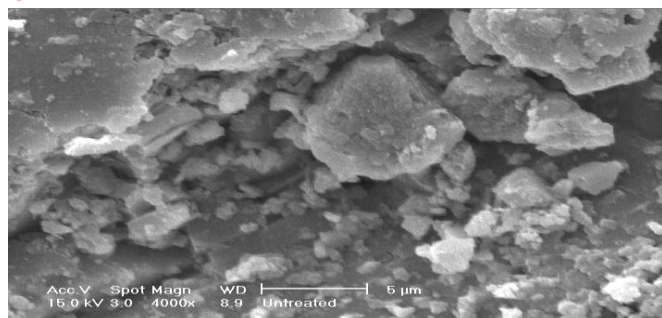
CHARACTERISTICS

Appearance	Grey powder
Grain Size	0 to 0.6 mm
Fresh density	Approx. 2

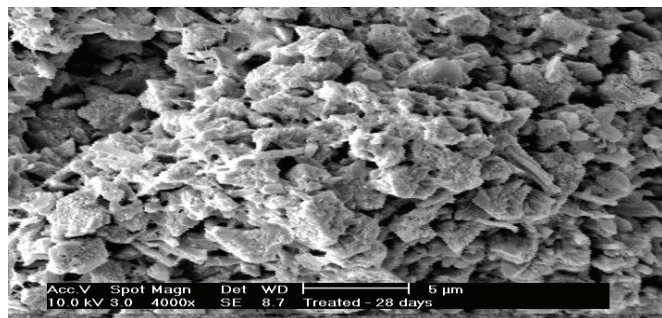
consumption (Kg/m ²)	0.5 kg per coat
Mixing water by weight	30 %
wet pot life at 20 °C	60%
Water permeability reduction comparing to untreated specimens according to BS EN 12390-8:2009, ASTM D 4541;2002 at 5 bar pressure after 28 days. (Concrete 40 MPa)	100%
Depth of water penetration at 5 bar pressure after 28 days	NIL
Pull off Strength (ASTM D 4541:2002) after 28 days	2 MPa

The values obtained are for **weberdry crystal** when applied in total thickness of 1 mm @23± 2°C.

UNTREATED



TREATED 28 DAYS



SURFACE PREPARATION

All surfaces to be treated with weberdry crystal must be thoroughly inspected. The concrete surface must be cleaned and free from oil, grease, paint, loose dust, mud and laitance. Horizontal surfaces should not have curing agents or hardeners applied prior to the application of **weberdry crystal**.

Honeycombs should be hacked off to expose the concrete.

All chipping and loose particles should be removed, clean surface with water before repairing.

Ensure all concrete surfaces are hosed down with water as moistures must be present in the capillaries prior to the application of **weberdry crystal**. New concrete must be at least three days old before it should be treated.

CONSUMPTION

0.8 – 1,2 kg/m² in two or three layers. This coverage is based on practical application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature, humidity, application method and finish required can alter consumption.

ANGLE FILLET

Do an angle fillet of 25mm X 25mm at all junctions between slabs and walls, with **weberep 331 TX**.

OUTLET AND PIPE PENETRATION

Around all outlet, hack around the pipe sleeves to make V groove joints surrounding the outlets and pipes to a depth of 25mm. Wash thoroughly the hacked off areas to expose clean concrete surfaces between the outlet pipe and concrete.

Mix **weberep 331 TX** in a container and stir thoroughly for at least 3 minutes until the mixture become thick mortar slurry. Filled the mixture or grout into the hacked off V grooves and level it.

MIXING

Mix each 25 kg bag **weberdry crystal** with approx. 7.5 liters of cool water and mix thoroughly for at least 3 minutes. The mixing can be done with a slow stirrer and stirred properly into a flowable thick consistent slurry.

It is imperative to ensure that **weberdry crystal** is thoroughly mixed. The mixture should be used up within half hour, after which time it will start to thicken. Never add extra water to restore workability.

APPLICATION METHOD

Before applying **weberdry crystal** onto the treated surface, ensure the substrate is moist but not visibly wet. To ensure that there is sufficient bond to the smooth surface, application must take place shortly.

weberdry crystal can be applied by using brush or broom with fine bristles.

APPLY BY BRUSHING METHOD

- **weberdry crystal** when mixed properly looks like a flowable paint and is easy to apply.
- 2 coats at 0.5 Kg/m² per coat are normally required. The coats are installed in two passes.
- After the application of the 1st coat of **weberdry crystal** at a rate of 0.5 kg/m², allow it to dry.
- When the 1st coat is in tacky condition, the 2nd coat is then ready to be applied. The procedure of application for 2nd coat of **weberdry crystal** is the same as the 1st coat except the application should be counter cross wised to the 1st application coat.

COVERAGE

1. First Coat: Approx. 0.5kg/ m²
2. Second Coat: Approx. 0.5kg/ m²

CURING

- Hose down the entire surface of the treated area thoroughly with water twice a day for a minimum 1 day.
- Protect it from direct sunlight, frost, wind and rain for 5-7 days. This can be done by covering it with polythene sheet, regular wet.

BACKFILLING

Normal backfilling is allowed after the concrete is cured. However, in the event that backfilling is done less than seven (7) days upon the initial setting, it is recommended that the backfilling material be kept moist to avoid the water from evaporating from the concrete.

STORAGE

weberdry crystal has a shelf life of 24 months when stored in a dry place under normal room conditions in its original packing.

SAFETY PRECAUTIONS

The product contains cement powders which, when mixed with water, release alkalis that could be harmful to the skin. It is preferable to do the application a well-ventilated area, to wear protective gear for hands, eyes and respiratory system and to avoid dust inhaling. Splashes on the skin should be washed away by cleaning with soap and water. In case of contact with eyes, wash thoroughly with clean water. If swallowed, do not induce vomiting. In both cases seek medical attention. The product is non-flammable.

DISCLAIMER

While the company guarantees its products against defective materials, the use and application of these products are made without guarantee since the conditions of their application are beyond its control. It is recommended to verify with the company that the product is suitable for the intended use, and that this Data Sheet version is the latest one. The company may modify it without prior notice. Technical characteristics are listed for guidance only. For more information, please contact the company's office in your location.

NOTE

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