

POWER CRYSTALLINE ADMIX

Integral Crystallization Admix Waterproofing



PRODUCT DESCRIPTION

Power Crystalline Admix is a unique chemical treatment for waterproofing and protecting concrete.

This admix is specially designed as a concrete additive at the time of batching and forms catalytic crystalline growth within the concrete, making it waterproof.

APPLICATION GUIDELINES

For waterproofing concrete, the recommended addition rate for Power Crystalline Admix is 0.8% - 1.2% by weight of cement. For enhanced chemical resistance please consult with Power Crystalline Admix Technical Services to determine the approximate addition rate. Power Crystalline Admix is added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment.

Note: We recommend a maximum water:cementitious ratio of 0.45. Under normal circumstances a water:cementitious ratio < 0.42 is ideal. The minimum cementitious content is 320 kg/m³.

Ready Mix Plant – Dry Batch Operation

Add Power Crystalline Admix in powder form to the drum of the ready-mix truck. Drive the truck under the batch plant and add 60% - 70% of the required water along with 140 kg - 230 kg of aggregate. Mix the materials for 2 -3 minutes to ensure the Power Crystalline Admix is distributed evenly throughout the mix. Add any additional materials to the ready-mix truck in accordance with standard batch practices

TYPICAL APPLICATION

- > Basements
- > Marine applications
- > Water tanks
- > Reservoirs
- > Water retaining structures
- > Civil substructures

TYPICAL PROPERTIES

Power Crystalline Admix	
Chloride permeability (ASTM 1202-94)	Very Low < 525
Water permeability	< 5.0 x 10 ⁻¹³
Water penetration (Din 1048.5)	< 15 mm
Shrinkage (AS 1012-13) 28 day	< 400 Microstrains
Chemical resistance	Resists mild acids and caustic materials in the pH range 3 - 12

All technical data stated herein is based on tests carried out under laboratory conditions.

KEY BENEFITS

- > Maximizes waterproofing of concrete
- > Potable water certified
- > Will withstand extreme hydrostatic pressure > 13 bar
- > Exceptional durability at -20°C to 50°C
- > Reduces shrinkage and cracking
- > Protection of concrete against certain aggressive chemicals including chloride attack to steel reinforcing
- > Can seal static cracks up to 0.4 mm
- > Complies with AS 1478.1-2000
- > Cost effective
- > Able to achieve waterproofing tightness with minimum
- > 300 mm thickness of Power Crystalline Admix concrete depth.

STORAGE

Power Crystalline Admix should be stored at room temperature (min 4°C and max 30°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of one year can be expected.



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Technical Data Sheet

Ready Mix Plant – Central Mix Operation

Mix Power Crystalline Admix with water to form a very thin slurry (e.g. 6 kg - 8 kg of powder mixed with 10 litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the Power Crystalline Admix throughout the concrete.

Precast Batch Plant – Pan Mixer

Add Power Crystalline Admix to the aggregate, and then mix thoroughly for 2 - 3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

Note: It is important to obtain a homogeneous mixture of Power Crystalline Admix and concrete. Therefore, do not add dry Power Crystalline Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur. For further information regarding the proper use of Power Crystalline Admix for a specific project, consult with our technical representative.

Curing

Normal practices for placing and curing concrete should be followed as per local standards.

HEALTH & SAFETY

Power Crystalline Admix should only be used as directed. We always recommend that the Safety Data Sheet (SDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Safety Data Sheet is available upon request from your local Power Crystalline Admix representative.

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product. Please note regional climatic conditions may cause a variation in the performance of the product. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all previous data. Please check with your local Power Crystalline Admix Chem office to confirm that this is current issue.
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