



CRYSTADMIX PCM

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Advanced Integral Waterproofing Admixture

Product Description:

CRYSTADMIX PCM is a high-performance integral waterproofing admixture for concrete that combines crystalline growth technology, microsilica densification, and superplasticizer dispersion technology. It reacts with cement hydration products to form insoluble crystalline structures that permanently seal pores and micro-cracks within the concrete matrix, improving waterproofing, durability, and strength.

Key Features & Benefits:

- Integral and permanent waterproofing protection
- Reduces permeability and water ingress
- Autogenous crack sealing up to 0.4 mm
- Improves compressive strength and durability
- Enhances workability without additional water
- Provides 12–20% water reduction
- Reduces shrinkage and micro-cracking
- Improves concrete densification and particle dispersion
- Eliminates need for external membranes in many applications
- Suitable for hydrostatic pressure conditions

Areas Of Application:

- Basements and foundations
- Water tanks and reservoirs
- Rafts and slabs
- Retaining structures
- Tunnels and underground structures
- Precast concrete elements

Surface Preparation:

Concrete mix design should maintain proper aggregate grading and adequate compaction to ensure optimal waterproofing performance. Minimum cement content should be 350 kg/m³ with a recommended water-cement ratio of 0.40–0.45 after water reduction adjustments. All batching equipment and mixers should be clean before application



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Mixing Instructions:

Preferred Method

1. Charge coarse aggregates into the mixer
2. Add 50–60% of total mixing water
3. Start mixing for 1–2 minutes
4. Add CRYSTADMIX PCM slowly into the wet aggregate mix
5. Mix for 2–3 minutes to ensure full dispersion
6. Add sand and cement
7. Add remaining water to achieve target slump
8. Continue mixing for minimum 3–5 minutes

Semi-Wet Site Method

1. Add aggregates
2. Add 30–40% water
3. Add CRYSTADMIX PCM
4. Mix for 2 minutes
5. Add sand and cement
6. Add remaining water
7. Mix for minimum 5 minutes

Dry Addition Method

1. Add CRYSTADMIX PCM to dry aggregates
2. Dry mix for 1–2 minutes
3. Add 70% water immediately
4. Mix for 3–4 minutes
5. Add cement and sand
6. Add remaining water
7. Mix for minimum 5 minutes

Application Guidelines:

Recommended Dosage

Application Level	Dosage (% of Cement Weight)	Performance Level
General Waterproofing	0.8%	Standard durability
Enhanced Waterproofing	1.0%	Improved permeability resistance
Hydrostatic / Pressure Conditions	1.2%	High-performance waterproofing



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Mixing & Placement Guidelines:

Parameter	Recommendation
Total Mixing Time	5–7 minutes
Workability Retention	30–45 minutes
Placement Time	As early as possible
Hot Weather Measures	Use chilled water / shade aggregates

Coverage/ Consumption:

Consumption depends on the concrete mix design and required waterproofing performance level. Recommended dosage ranges between 0.8% to 1.2% by weight of cement depending on exposure conditions and hydrostatic pressure requirements.

Curing & Protection:

Proper compaction and curing are critical to achieve optimum waterproofing performance. Concrete should be protected from rapid moisture loss during curing. Waterproofing efficiency depends on overall concrete quality and site workmanship. Site trials are recommended before full-scale application.

Packaging:

- 25 kg moisture-resistant bags
- 20 kg plastic pails

Storage & Shelf life:

Shelf life is 12 months in unopened packaging when stored in dry and shaded conditions away from moisture exposure.

Health & Safety:

CRYSTADMIX PCM is non-toxic and non-flammable. Avoid inhalation of dust and contact with eyes or skin. Suitable personal protective equipment including gloves, goggles, and dust masks should be used during handling and application. Refer to the Material Safety Data Sheet (MSDS) for complete safety information.



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Technical Data:

Property	Expected Performance
Appearance	Powder
Water Reduction	12–20%
Compressive Strength	+8% to +18%
Water Penetration	Significant reduction
Capillary Absorption	Reduced
Crack Sealing	Up to 0.4 mm
Resistance to Hydrostatic Pressure	High
Durability	Enhanced

Important Notes:

- Proper compaction and curing are critical
- Waterproofing performance depends on concrete quality
- Always conduct site trials before use
- Do not overdose without technical approval