

Catalyst PWC

Biochemical modified silicate waterproofing solution.

DESCRIPTION

Catalyst PWC is a biochemical modified silicate solution that provides long-term waterproofing and durability benefits to concrete. It penetrates concrete and reacts with free calcium and water to form a water insoluble calcium silicate hydrate gel complex in cracks, pores and capillaries. This gel creates a sub-surface barrier against the ingress of water and contaminants such as chloride ions.

Catalyst PWC will seal existing leaking cracks up to 0.8mm. In the matrix the product remains active when in contact with water to provide autogenous healing properties to future hairline cracks.

ADVANTAGES

Catalyst PWC delivers the following advantages;

- Long term performance. No re-application or future maintenance required.
- 100% trafficable after the first watering. Minimal risk of damage during construction or thereafter.
- If stubborn cracks are present they are easy to find and fix. No lifting of membranes required.
- Permanently seals existing cracks to 0.8mm.
- Reseals future hairline cracking.
- Increases surface hardness.
- Allows moisture vapour permeability.
- Suitability for tanking applications (positive hydrostatic pressure).

AREAS OF USE

Catalyst PWC is suitable for use in the following areas;

- Rooftops
- Potable Water Tanks
- Carparks
- Facades
- Precast Panels
- Podium Decks

SUBSTRATES

Catalyst PWC is suitable for application on;

- Concrete
- Screeds
- Cement Surfaces
- Render

TECHNICAL DATA (@ 25°C)

Number of Coats:	1
Coverage: (per coat)	
• Normal surfaces:	• 5m ² /L
• Smooth, dense surfaces:	• 6m ² /L
• Rough, porous surfaces:	• 4m ² /L
Full Cure:	48 hours
Colour:	Clear
Clean Up:	Water
Shelf Life:	12 months

ANCILLARY PRODUCTS

- Crommelin[®] Contractor Membrane Applicator Brush – 100mm, 75mm
- Crommelin[®] Contractor Membrane Roller Cover – 230mm

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TEST DATA

Properties	Measurement / Standard	Test Results		
Water Permeability (5 N/mm 72 hrs)	Testech Sdn Bhd - 3/6/01	40-50% reduction		
	SETSCO - 28/6/02	50% reduction		
Chloride Ion Penetration	Testech S/B - 28/4/00	Untreated	Treated	
	Warnock Hersey - 26/1/89	.433	.036	
Compressive Strength	Testech S/B - 14/6/01	.459	.199	
	12/7/01	35.0	43.5	
	SETSCO - 28/6/02	38.5	45.0	
Crack Sealing	Testech S/B - 28/8/02	43.5	49.0	
		Up to 0.8 mm in whole of block crack. Unable to test enclosed crack.		
Resealing After Forced Failure	Testech S/B - 28/8/02	Block re-clamped after first failure; water only applied, a seal was achieved and the clamp removed.		
Hardness (Moh Scale using James Scratch Test)	Testech S/B - 28/4/00	Untreated	Treated	
		Grade 25	4.5	6.3
	Warnock Hersey - 26/1/89	Grade 25	4.3	6.0
		Grade 40	3.5	4.9
		Grade 40	3.1	4.3
Testech S/B - 31/7/01	Grade 25 (With Nylon fibre)	4.9	6.1	
Water Absorption	SETSCO - 28/6/02	6.0	6.8	
Water Penetration	Testech S/B - 31/7/01	0.67%	0.22%	
	SETSCO - 28/6/02	0.6%	0.4%	
Non-Toxicity (Human levels)	SETSCO - 28/6/02	51.1	13.8	
	SISIR - 2/3/90	(No penetration in good concrete)		
pH	Warnock Hersey - 26/1/89	No ill effects		
		Practical Tests on Exotic Tropical Fish in Aquariums, testing for more than 15 years.		
pH	Warnock Hersey - 26/1/89	11.9	Resistant to acids at 2.4 and alkalis at 11.5	
		Resistant to acids at 2.4 and alkalis at 11.5		

NOTE: All tests conducted on two halves of the same core to mitigate errors in test material preparation. All tests run on specific gravity of 1.225

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SUBSTRATE PREPARATION AND PRIMING

Full substrate preparation instructions can be found at www.crommelin.com.au/full-instructions/

- The concrete mix design should be free of any cement replacement materials such as Type F fly ash, slag or silica fume, or waterproofing admixtures. Ensure Ordinary Portland Cement/Type A, G.P. (General Purpose) or S.L. (Shrinkage Limited) cement is specified only.
- Surfaces must be clean, dry and dust free.
- New concrete must be at least 28 days old. Renders may be treated after 7 days.
- Any materials that retard penetration such as curing compounds must be removed prior to application.
- Old or carbonated concrete requires Calcium solution treatment to reinstate free Calcium.
- Where segregation or voids are apparent, chip out, treat with Catalyst PWC, and then make good with cementitious materials.
- Pour structural slabs to fall lines where possible. No protective screed is required.
- For large or stubborn cracks, grind out and flood crack with product. A Calcium solution may be required to bulk up the product in large cracks. Fill with a non-shrink or polymer modified grout, or revert to an elastomeric sealer if there is a possibility that the crack is 'working' or 'volatile'. In large cracks where product runs through quickly, use waterproof tape on the underside to pond product in the crack.
- Good concrete practice must be followed such as adequate curing, compaction and vibration.

APPLICATION CONDITIONS

- Do not apply when temperature is below 7°C or above 35°C.

APPLICATION

Full application instructions can be found at www.crommelin.com.au/full-instructions/

- First locate all cracks and flood with solution.
- Apply the solution to the remaining area at the rate of between 4 - 6m²/L.
- When surface becomes touch dry (2 – 6 hours depending on wind conditions and ambient temperature) – flood spray the treated areas with water. First watering must begin at maximum of 6 hours even if product still wet.
- Day 2 – 24 hours later water again.
- On Day 3 – 24 hours later water again.

CLEAN UP

- Wash all equipment with water before product dries.

PRECAUTIONS

- Protect glass, aluminium, wood and painted finishes from overspray.
- Catalyst PWC is not suitable for sealing working/volatile cracks due to structural defects or caused by mechanical damage. Nor will it provide continual crack healing in concrete mixes containing Type F fly ash, slag, silica fume or waterproofing admixtures.
- The product on its own is not suitable for sealing where segregation and voids are likely, such as construction joints.
- Not suitable around penetrations where there is a non-masonry / cementitious interface.
- Catalyst PWC is not suitable for negative hydrostatic pressure applications such as the inside face of a basement/retaining wall which is continually wet.

WARRANTIES

A standard warranty period of 10 years is offered for Crommelin® Catalyst PWC.

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Extended warranties are available for project specific applications. Please contact your Crommelin® representative, or the Crommelin® technical support team for detailed specifications applicable to your project and warranty requirements.

TRANSPORT AND STORAGE

- Size: 1L, 4L, 15L
- Weight: 1kg, 5kg, 15kg
- DG Class: N/A
- Flash Point: N/A
- UN Number: N/A
- Cool and Dry Storage

SAFETY AND FIRST AID

Catalyst PWC Safety Data Sheet is available from Crommelin® upon request.

Safety

- Ensure good ventilation and avoid breathing vapours.
- Avoid skin and eye contact. Wear gloves and eye protection. Remove splashes on skin immediately and remove contaminated clothing.
- Keep out of reach of children.
- Keep container sealed when not in use.
- Do not swallow.

First Aid

- If poisoning occurs, contact a doctor or poisons information centre: Ph. 13 11 26.
- If swallowed, do not induce vomiting. Give a glass of water to drink.
- If in eyes, hold eyes open and flood with water for at least 15 minutes.
- If not breathing, apply artificial respiration.

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Customers need to undertake their own assessment to determine the suitability of a product for the intended use. As the performance of any product is subject to a wide variety of different surface types as well as environmental and surface-specific conditions, it is essential that a sample of the product be applied to the intended area of use to ensure it is acceptable in appearance and finish and that it performs as required on the specific surface.

Crommelin® also reserves the right to update information without prior notice, to reflect ongoing research and product development.