

WATER-BASED DEEP PENETRATING CRYSTALLINE MEMBRANE

Description

CS1-TS is a water-based nano-graded sealer solution, which can form concrete preservative waterproofing membrane using Canadian technologies. The composite concrete membrane is formed to waterproof and protect the concrete from harmful chemicals to extend the life time of concrete. The sealer provides strong resistance against both positive/ back pressure (-ve) for waterproofing. It allows concrete breathing prohibits water droplets ingress.

Features

- Inhibition of oils, greases and light acids ingress
- No change to the features of the concrete, i.e. slip resistance and aesthetics properties.
- Harden the concrete by bonding with the particles during penetration
- Prevention of chlorides and airborne pollutants deteriorations
- Long-term pore blocking action creates hydrophobic barriers against water penetration
- Applicable to withstand negative water pressure
- Non-toxicity, non-causticity, non-flammability

Uses

Concrete or cementitious substrate surfaces e.g. Bridgedeck waterproofing, bridge and highway median barrier, Parapet, Columns, Subways, Dams, tunnels, roads, sidewalks, Airport runways, wells, ponds, Overflow-drains in swimming pools, Wine cellars, basements, foundations, Floor and slabs, Sport facilities, Tanks (sewage treatment plants and drinking water reservoir), Pier, Roofs, Cracks underneath tiles, Retaining walls, Concrete pipes inside beams etc.

Properties

Description	Standard	Performance
Concrete penetration depth (mm)	EN 13501-1	C30~C35 (up to 40mm)
	CNMS1146	C60~C70 (10mm-30mm)
	AASHTO T259	19mm (Grade 30/20D)
Chloride Ion penetration-resistance	ASTM C1205-05 / ASTM C1556 - 03 & Taywood Method	Passed
Negative water pressure resistance	SINTEF	1 Mpa -ca 10 atm
	GBJ 82-85	> 25 bar (Grade 30/20D)
	ONORM B 3303	7 bar (Penetration: 63 mm)
Non-flammability	EN 13501-1	Euro-class A1
Compressive strength (Mpa)	BS EN 12190:1998	Increase 18%
Abrasion resistance	EN 13813	> 30%
Anti-surface absorption	BS 1881: Part 208 :1996	0 mL/(m ² .S)
Capillary absorption & Water permeability	EN 1062-3	w <0.1kg/m ² x h0.5
Chemical resistant (Absorbing mean)	EN 2812-1	No visible defects
Chemical resistant (Astringent attack)	EN 13529	No visible defects
Carbonization resistance	UNI 9944	Total resistance
	GB/T 50082 - 2009 with modifications	Suppression ratio: 100%
Freeze-thaw deicing	EN 13687-1	≥ 1.5N/mm ²
Freeze-thaw cycles resistance	UNI 7087/72	No visible damages after 300 cycles
Falling-weight test	EN ISO 6272-1	Classes III : >20Nm
Bond strength by pull-off	EN 1542	≥1.5 N/mm ²
Non-toxicity (8 major toxic substances)	WHO-certified	<0.01mg/L
Drinkability	D.M. 21.03.73	Passed
Water-based, Environmentally-friendly & VOC-free	USA EPD Certified (No. S-P- 00413)	Approved

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Properties

Description	Performance
Penetration depth (mm)	Up to 40 mm (Grade 30/20D)
Colour	Clear
Specific gravity (25°C)	1.13
Number of coating	1
Shelf Life (Sealed container)	18 months (5 - 32 °C)
Surface Drying Time (15°C)	2 - 4 hours
Coverage	3 - 4.5 m ² /L for vertical concrete surface
	3 m ² /L for lateral concrete surface

Application

- Surface preparation
 - Surface cleaning
(Remove oil, grease, debris, stains, paint or failed membranes or coatings)
 - Pre-wet the concrete surface 8 hours before coating is recommended.
- Coating method
 - Apply evenly on the prepared surface without ponding water by sprayer, paint brush or roller.
 - Vertical surfaces coating should be applied from bottom-up to ensure even solution absorption.
 - If required, additional coat(s) for surfaces protection enhancement shall be applied with 12 hours curing.

Packing

20 L/ pail

Caution

- To prevent precocious reaction, CS1-TS should be kept out of cement powder during application.
- Wear protective mask, goggles and gloves during application.
- All tools should be washed with clean water after use.
- Any skin or eyes contamination should immediately be washed with clean water, seek medical attention if necessary.
- Keep out of reach of children.
- Application method and quantity may vary in different situation, please seek authorized supplier for technical advice if necessary.