PRODUCT DATA SHEET

CCCW

Cement-based Penetrating Crystalline Waterproof Coating (One-component, Rigid Waterproof Material)

DESCRIPTION

CCCW is a one-component rigid waterproof coating, blending specialized cement, quartz sand, and active crystalline additives. When mixed with water, it penetrates concrete to form insoluble crystals, sealing pores and microcracks for permanent anti-seepage.

USES

Permanent waterproofing for concrete structures: basements, tunnels, and elevator shafts.
Water-containing facilities: drinking water reservoirs, swimming pools, and sewage treatment tanks.
Sewers, chemical plants, and industrial concrete structures.
Anti-seepage reinforcement for old concrete buildings.

FEATURES

- Crystalline reaction integrates with concrete for long-term effectiveness.
- Penetrates up to 5cm into concrete substrates.
- Withstands water head pressure up to 30 meters.
- Safe for drinking water projects; compliant with environmental standards.
- Enhances concrete durability against chemical erosio.
- Suitable for brushing or dry powder spreading.

CERTIFICATES AND TEST REPORTS

- CE Certification (EN 1504-2)
- REACH Compliance (EC 1907/2006)
- ASTM C109/C109M
- ANSI/NSF 61
- Tested by ILAC-accredited laboratories (SGS/Intertek)

TECHNICAL DATA

Property	Standard Value	Test Result	Test Method
Wet Base Bonding Strength (28d, MPa)	≥1.0	1.3	ASTM C1583
Impermeability Pressure Ratio (With Coating, 28d)	≥250%	300%	EN 1504-2
Impermeability Pressure Ratio (Coating Removed, 28d)	≥175%	233%	EN 1504-2
Penetration Depth	≥5 cm	≥5 cm	Internal Test Method
Water Pressure Resistance	≥3.0 MPa	≥3.0 MPa	ASTM D6083
Setting Time (Initial)	≥45 min	60 min	ASTM C191

PRODUCT INFORMATION

Item	Specification
Type	One-component powder
Appearance	Uniform white powder, no lumps
Package	20 kg / Plastic drum
Mix Ratio (Powder:Water)	1:0.35 – 0.4 (mass ratio)
Reference Dosage	1.5 – 2.0 kg/m² (brushing method); 1.5 kg/m² (dry powder method)
Construction Temperature	5℃ – 35Ÿ℃
Pot Life	≤20 minutes (after mixing)
Shelf Life	12 months (sealed, dry storage)
Storage Conditions	Cool, dry, ventilated; avoid moisture, rain, and direct sunlight
Application Method	Brushing (slurry) / Dry powder spreading

BASIS OF PRODUCT DATA

All technical data is obtained from standard laboratory tests under controlled conditions (23±2, 50±5%RH). Actual performance may vary due to concrete quality, substrate condition, mixing ratio, and construction methods.

LOCAL RESTRICTIONS

Complies with EU CE (EN 1504-2), US ANSI/NSF 61, and international environmental regulations. For specific national/regional requirements, refer to the local product data sheet.

ECOLOGY, HEALTH AND SAFETY

Non-toxic, eco-friendly, and safe for drinking water contact. Non-flammable and non-explosive. Wear protective gloves and goggles during construction to avoid skin/eye contact; rinse with plenty of water if contact occurs. Dispose of waste and empty packaging according to local environmental regulations.

LEGAL NOTES

All information in this data sheet is for professional reference only. CANLON assumes no liability for loss or damage caused by improper storage, mixing, or application. Users must verify suitability for their specific project and follow local building codes.

INSTALLATION METHOD

Substrate Preparation

Remove floating slurry, dust, oil, and debris from the concrete surface. Roughen the surface to expose capillary pores, then clean thoroughly with high-pressure water. Ensure the substrate is fully moistened (no standing water) to facilitate penetration.

Slurry Preparation (For Brushing Method)

Mix the powder with clean water at a ratio of 1:0.35 – 0.4 (mass). Add water first, then gradually add the powder and stir vigorously to form a smooth, uniform slurry. Use the mixed slurry within 20 minutes; do not add additional water after mixing.

Application

Apply the slurry evenly with a hard-bristled brush in multiple layers. Wait for the surface to dry and turn white before applying the next layer. If the interval exceeds 12 hours, lightly spray water on the previous layer before reapplication.
Spread dry powder evenly over fresh concrete at 1.5 kg/m², then press firmly with a wooden trowel and calendar to ensure full integration.

Curing & Maintenance

Maintain the coated surface for 72 – 168 hours (3 – 7 days) by spraying water or covering with wet cloths. Protect the surface from rain for 24 hours and from frost, direct sunlight, or temperatures below 5 for 48 hours post-application.

Quality Inspection

After full curing, conduct a water pressure test or closed-water test to verify waterproof performance. Check for unpenetrated areas or cracks and repair immediately with fresh slurry.

Protection

Avoid heavy impact, drilling, or mechanical damage to the concrete surface during curing. Prevent contamination from sewage or chemicals until the crystalline reaction is complete.

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Product Data Sheet
Canlon CCCW 2026,3.15
Version3.0
00796005330229 5797