CCI WPC-400

Acrylic Acid Waterproof Coating

Product Introduction:

CCI WPC-400 is a gray powdery material formulated with OPC (Ordinary Portland Cement) as the base material and mixed with active chemical ingredients. The waterproofing mechanism mainly uses its porosity. As water penetrates into the pores of the structure, the active chemicals with water penetrates into the interior and reacts to form insoluble crystals. The active chemical substances hydrate with non-hydrated cement particles and promote cement hydration to form cement hydrated crystals, generating a large number of crystals to fill and seal.

Main Feature:

- Non-toxic, harmless, and environment-friendly
- Long-term waterproofing effect
- Has secondary impermeability and self-healing capabilities
- Anti-corrosion, anti-aging, and protection of steel bars
- Ease-of-use

Application:

- Widely used in tunnels, dams, reservoirs, nuclear power plants, cooling towers, underground railways, overpasses, bridges, underground diaphragm walls, airport runways, pile head foundation treatment pools, industrial and civil building basements, and roofs, waterproof construction of toilet and bathrooms, and repair of all concrete structural defects such as concrete construction facilities.

Construction Method:

Blade Coating Method

- Clean the debris and floating mud mortar on the waterproof coating base surface, and repair the severely uneven concrete base surface.
- Eradicate and clean the oil stains and debris on the waterproof surface of the cement-based concrete structure, then rinse with clean water, and apply waterproof materials on the wet-based surface.
- If serious leakage is found on the base surface, leak-stopping materials should be used for construction first, and then this material can be used to ensure the quality of the project.
- The water-cement ratio is 0.3-0.4:1, the dosage is 1.4-1.7 kg/m^2 and the thickness is 1.0 mm (±0.05mm) as standard.

Roller Coating

- Use a roller to roll the treated base surface evenly at an amount of 1.4-1.7 kg/m^2

Dry Spreading

- Construction shall be carried out after the concrete is poured densely, rolled and flattened (before the concrete is completely solidified). Sprinkle the specific amount evenly on the concrete surface, compact and smooth in time setting, check whether there are any bad construction areas and repair them in time.

- If it is exposed to the sun, it should be sprayed with water for maintenance, Pay attention to spraying evenly and don’t cut corners.

NOTE:

- Construction at normal temperature is not suitable for construction under severe conditions such as below zero degrees Celsius, rain, fog, and sandstorms.
- Drinking water is the best choice for mixing water and curing water. Unclean polluted water should not be used.
- Construction must be carried out on a concrete structure or a solid cement mortar base surface. Do not apply it directly to the surface of the ash layer. The base surface should be clean and free of floating dust, old coatings, dust and dirt, and other debris to provide a fully open capillary system, which is conducive to the penetration of this product and the formation of crystals.
- All concrete to be coated with this product must be carefully inspected for structural defects, such as formwork tie rod holes, cracks, honeycomb pitted interior surfaces.
- Special treatment is required for pipe joints in bathroom construction. A 10 mm deep V-shaped groove can be cut along the junction of the pipe wall and the base surface to seal it, and then the base surface waterproof coating can be applied.
- Ensure coating thickness and recommended application dosage. When using the brushing method for construction, if the slurry is too thin, stirred unevenly, or the water is added twice, it will easily cause the base surface to become powdery or rusty.
- If the concrete component needs to be backfilled with soil, wet soil can be filled 36 hours after construction, but dry soil cannot be backfilled within 7 days to prevent it from absorbing water to the waterproof coating.

Technical Parameters

Number	Items		Result	Remarks
1	Appearance		Uniform, no agglomeration	Passed
2	Moisture Content, %		≤1.5	Passed
3	Fineness, 0.63mm/%		≤5	Passed
4	Ion Content, %		≤0.10	Passed
5	Flexural Strength, MPa @ 28d		≥2.8	Passed
6	Wet-based surface bonding strength, MPa @ 28d		≥1.0	Passed
7	Compressive Strength, MPa @ 28d		≥15.0	Passed
8	Constructivity	Add water and stir	Barrier-free scraping	Passed
		20 mins	Barrier-free scraping	

Storage:

- Store waterproofing coatings in a cool, dry place away from direct sunlight and extreme temperatures.
- Seal the container tightly to prevent moisture ingress and avoid freezing temperatures.
- Keep the coating away from heat sources, maintain stable humidity levels, and stack containers carefully.
- Check expiry dates and follow manufacturer's recommendations to maintain optimal performance.

Packaging:

- 25kgs/pail