

# Technical Data Sheet

## BC Rock Plus Ultra

### Ultra High-Performance Crystalline Waterproof Coating

#### 1). Product Description

BC Rock Plus Ultra is an improved version of BC Rock Plus, formulated with advanced crystallization and osmotic technology to achieve zero water permeability and exceptional durability.

It exhibits a strong pozzolanic reaction, where silica-rich materials react with calcium hydroxide ( $\text{Ca}(\text{OH})_2$ ) to form calcium silicate hydrates (C-S-H). This reaction enhances strength, durability, and long-term performance of concrete and mortar.

#### 2). Key Features & Advantages

- Zero water permeability with internal crystallization.
- Seals cracks up to 0.4 mm by continuous crystal growth.
- Resistant to positive and negative water pressure.
- Withstands permanent immersion and saltwater environments.
- Excellent resistance to sulfate and chloride attack.
- Vapor permeable – allows concrete to breathe.
- Can be applied on damp surfaces.
- Provides long-lasting protection, reducing maintenance cost.

#### 3). Applications

- Drinking water tanks and reservoirs
- Basements and below-grade structures
- Concrete foundations, retaining walls, and slabs
- Swimming pools and water features
- Irrigation channels and dams
- Water treatment plants and cooling towers
- Silos, tunnels, and shafts
- Prefabricated panels and masonry walls



#### 4). Technical Data

Property	Test Method	Unit	Typical Value
Density of cured mortar	—	g/cm <sup>3</sup>	1.75 ± 0.10
Water penetration (direct pressure, 850 kPa)	EN 12390-8	mm	Nil
Water penetration (indirect pressure, 250 kPa)	EN 12390-8	mm	Nil
Water vapor permeability	EN ISO 7783	Class	I (Permeable to vapor)
Compressive strength (28 days)	EN 13892-2	MPa	>40.7
Flexural strength (28 days)	EN 13892-2	MPa	>8.0
Adhesion on concrete (28 days)	EN 1542	MPa	1.6
Potable water suitability	BS 6920	—	Suitable
Pot life @ 20°C, 50% RH	—	min	30–40
Drying time @ 20°C, 50% RH	—	h	4–6
Curing time before mechanical load	—	days	3
Curing time before immersion	—	days	7

#### 5). Surface Preparation

- Substrate must be clean, sound, and free from grease, dust, oil, paint, or loose particles.
- Remove contaminants by water jetting, sandblasting, or mechanical cleaning.
- Saturate the substrate with clean water before application, but remove any standing water.

#### Mixing

- Mix 20 kg of BC Rock Plus Ultra with 5–6 liters of clean water.
- Use a low-speed mechanical mixer (400–600 rpm) for homogeneous consistency.
- For spray application or high temperatures, slightly increase water ratio if necessary.



## Application

- Apply by brush, roller, trowel, or spray equipment.
- Apply two coats in perpendicular directions for best coverage.
- Maintain a minimum 6–8 hours interval between coats.
- Protect fresh coatings from rain and direct sunlight for 24 hours.

## Curing

- Allow the coating to cure 3 days before mechanical loading and 7 days before immersion.
- In hot weather (>30°C), lightly mist the surface to prevent rapid drying.

## 6). Consumption

Application Method	Consumption per Coat	Total (2 Coats)
Brush / Broom / Spray	1.0 – 1.5 kg/m <sup>2</sup>	2.0 – 2.5 kg/m <sup>2</sup>
Dusting on fresh concrete	1.5 – 2.5 kg/m <sup>2</sup>	—

*Actual coverage may vary depending on surface porosity and profile.*

## 7). Packaging & Colors

- 20 kg bag
- Available in Grey and White

## 8). Storage & Shelf Life

- Shelf life: 12 months in sealed bags.
- Store in a dry, shaded area, away from moisture and direct sunlight.
- Temperature range: above 5°C and below 35°C.

## 9). Health & Safety

- Contains cement and reactive compounds; use gloves, goggles, and masks during handling.
- Avoid skin and eye contact; wash thoroughly with soap and water if contact occurs.
- Do not inhale dust.
- Refer to BC Rock Plus Ultra Safety Data Sheet (SDS) for full details.

### DISCLAIMER

The data presented in this sheet are based on laboratory testing and practical experience. Variations in substrate, application method, and environmental conditions may impact performance. Users are advised to carry out tests under their own conditions. Building Chemistry Industry's responsibility is limited to the product replacement in cases of proven manufacturing defect.

