

# Technical Data Sheet

## BC Coat EPU

### Two-Component Hybrid Epoxy–Polyurethane Protective Coating

#### 1). Product Description

BC Coat EPU is a two-component, flexible protective coating based on hybrid epoxy–polyurethane resins, designed for long-term protection of concrete and masonry surfaces. The product combines the superior adhesion and hardness of epoxy with the flexibility and UV resistance of polyurethane.

It is supplied in pre-measured quantities ready for on-site mixing and application. The cured coating forms a dense, impermeable, chemical-resistant barrier that withstands harsh industrial, marine, and underground environments.

#### 2). Features / Benefits

- Excellent chemical, abrasion, and UV resistance
- Flexible and impermeable coating suitable for dynamic structures
- Primer less application on sound, dry concrete surfaces
- Excellent adhesion to concrete and steel substrates
- Easy to apply by brush, roller, or airless spray
- Does not support bacterial or fungal growth
- Provides a seamless waterproof film
- Non-flammable, low-VOC, and environmentally friendly

#### 3). Recommended Uses

BC Coat EPU is ideal for the protection of:

- Concrete floors , walls in industrial or utility facilities and also parking areas.
- Manholes, pipes, and sewage treatment areas
- Secondary containment and effluent treatment structures
- Sea water tanks, channels, and reservoirs
- Foundation waterproofing and water treatment installations
- Marine and chemical processing areas



#### 4). Technical Information

Property	Test Method / Condition	Typical Value
Base	Epoxy–Polyurethane Hybrid	—
Color	Grey or as required	—
Finish	Smooth / Semi-gloss	—
Mixed Specific Gravity	@ 25°C	~1.48 g/cm <sup>3</sup>
Mixing Ratio (A:B)	By weight	4:1
Pot Life	ASTM D2471	~3 h @ 25°C ; ~1.5 h @ 35°C
Tack-Free Time	—	~6 h @ 25°C ; ~3 h @ 35°C
Full Cure	—	~7 days @ 25°C ; ~4 days @ 35°C
Tensile Strength	ASTM D638	~10 N/mm <sup>2</sup>
Elongation at Break	ASTM D638	20–25%
Adhesion to Concrete	ASTM D4541	≥ Concrete strength
Water Absorption	ASTM D570	~0.2%
Abrasion Resistance	ASTM D4060 (CS-17 / 1000 cycles)	~0.1 g loss
VOC Content	—	<50 g/L
Service Temperature	—	-10°C to +80°C



## 5). Surface Preparation

- The concrete substrate must be sound, dry, and at least 28 days old, with moisture content below 5%.
- Remove laitance, dust, oil, grease, and contaminants by grit blasting or mechanical grinding.
- Repair blowholes, cracks, or voids with a compatible repair mortar before coating.
- Metal substrates must be grit-blasted to SA 2½ (ISO 8501-1) and primed immediately after preparation.
- Ensure surface temperature is at least 3°C above the dew point during application.

### Mixing Instructions

1. Stir the Base (Component A) separately to a uniform consistency.
2. Add Hardener (Component B) completely into Component A.
3. Mix mechanically using a slow-speed drill (300–400 rpm) with a paddle for 3–5 minutes until homogeneous.
4. Do not add solvent or thinner unless specified by BCI Technical Department.

## 6). Application Guidelines

Method	Details
Brush/Roller	Apply first coat (~200 µm WFT) ensuring complete coverage. Allow to set before applying second coat.
Airless Spray	Suitable for large surface areas. Consult BCI Technical Team for nozzle size and spray pressure settings.
Film Build	Two coats of ~200 µm WFT each (approx. 400 µm total). Higher film thickness achievable by multi-layer application.

### Environmental Conditions

- Substrate temperature: 10–40°C
- Relative humidity: <85%
- Avoid application under direct sunlight or during condensation conditions.



**Coverage:**

0.59 kg /m<sup>2</sup> at 400 micron in two coats.

## 7). Packaging

20 kg Kit available

- pre-measured components for easy site mixing and consistent performance.

## 8). Storage & Shelf Life

- Store in a dry, shaded place between 10°C and 30°C.
- Protect from frost, direct sunlight, and high humidity.
- Shelf life: 12 months in unopened containers under recommended conditions.
- If the shelf life is exceeded, contact BCI Technical Department for evaluation before use.

## 9). Health & Safety

- Avoid skin and eye contact; wear gloves, goggles, and protective clothing.
- Ensure adequate ventilation during application.
- In case of contact, rinse immediately with plenty of water and seek medical advice.

### 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.

