



Technical Data Sheet

BC FLOOR EPU 100

Two-Component Hybrid Epoxy–Polyurethane Protective Coating

1). Product Description

BC Floor EPU 100 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 Floor EPU 100 is ideal for the protection of:

- Concrete floors and walls in industrial or utility facilities
- 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 ³ |
| 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 ² |
| 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.



Hot Weather Practice

- For temperatures above 35°C, store materials in shaded conditions.
- Apply during cooler parts of the day and avoid excessive mixing time to extend pot life.

7). Packaging

- 20 kg Kit (16 kg Component A + 4 kg Component B)
- 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.

