

METHOD STATEMENT

BC Coat EPU-400

Solvent-Free Epoxy Coating System for Potable Water Structures

Manufacturer: [Building Chemistry Industry](#)



1. PURPOSE

The purpose of this method statement is to define the procedure for surface preparation, mixing, application, curing, inspection, and safety measures for BC Coat EPU-400, ensuring a hygienic, durable, and potable-water-safe epoxy lining system for water-retaining structures.

2. SCOPE

This method statement applies to the application of BC Coat EPU-400 on concrete and steel substrates for potable water tanks, reservoirs, treatment plants, silos, and food-related facilities.

The scope includes works in confined spaces and on damp (SSD) concrete surfaces.

3. REFERENCES

- Manufacturer's Technical Data Sheet (TDS) – BC Coat EPU-400
- Manufacturer's Safety Data Sheet (SDS) – BC Coat EPU-400
- ISO 8501-1 – Surface preparation of steel substrates

- Relevant potable water approval guidelines (local authority / project specification)
- Project drawings and specifications

4. MATERIALS

- BC Coat EPU-400 – Part A (Epoxy Resin)
- BC Coat EPU-400 – Part B (Hardener)
- Approved epoxy cleaning solvent (for tools only)
- Repair mortar for surface defects (if required)

5. TOOLS & EQUIPMENT

- Low-speed mechanical mixer (300–500 rpm)
- Measuring and mixing containers
- Steel trowel, brushes, rollers
- Airless spray machine (if applicable)
- Wet film thickness (WFT) gauge
- Surface preparation tools (grinder, blasting machine)
- Ventilation equipment for confined spaces
- PPE: gloves, goggles, respirators, protective clothing

6. RESPONSIBILITIES

- Project Engineer: Overall compliance with specifications and approval of works
- Site Supervisor: Execution of work as per method statement
- QA/QC Engineer: Inspection of surface preparation, DFT, curing, and documentation
- Safety Officer: Implementation of health, safety, and confined-space procedures

7. WORK PROCEDURE

7.1 Surface Preparation

7.1.1 Concrete Surfaces

1. Ensure concrete is structurally sound, fully cured (minimum 28 days), and free from laitance.
2. Remove oil, grease, curing compounds, algae, and contaminants by mechanical grinding or grit blasting.
3. Repair blowholes, honeycombs, and surface defects using approved repair mortar.

4. Achieve a clean, open-textured surface.
5. Substrate may be SSD (Saturated Surface Dry) but must be free from standing water.

7.1.2 Steel Surfaces

1. Grit blast steel surfaces to SA 2.5 as per ISO 8501-1.
2. Remove all dust and debris after blasting.
3. Apply BC Coat EPU-400 immediately after preparation to avoid flash rusting.

7.2 Mixing Procedure

1. Stir Part A individually to ensure uniform consistency.
2. Add the entire contents of Part B into Part A (mix ratio 17:3 by weight).
3. Mix using a low-speed mechanical mixer for 3–5 minutes until homogeneous.
4. Scrape sides and bottom to ensure complete mixing.
5. Transfer mixed material into shallow containers to extend pot life.
6. Do not mix partial packs or add solvents/thinners.

7.3 Application Procedure

1. Apply BC Coat EPU-400 by brush, roller, or airless spray.
2. Apply in two coats, each at approximately 200 microns DFT.
3. Maintain uniform application and correct coverage (~5 m²/L per coat).
4. Ensure proper ventilation during application, especially in confined spaces.
5. Observe overcoating intervals:

Temperature Overcoating Interval

10°C 18 – 72 hours

20°C 8 – 48 hours

6. Minimum application temperature: 10°C
7. Maximum application temperature: 30°C
8. Avoid application when relative humidity exceeds 90%.

7.4 Curing

1. Allow coating to cure under controlled conditions.
2. Protect coated surfaces from water, condensation, and mechanical damage during curing.
3. Full cure: approximately 7 days at 20°C.

4. The coating is safe for potable water contact only after full cure.

8. THICKNESS CONTROL

- Use a WFT gauge during application.
- Target DFT:
 - Per coat: 200 microns
 - Total system: 400 microns
- Record readings as part of QA/QC documentation.

9. CLEANING

- Clean tools and equipment immediately after use with approved epoxy solvent.
- Cured material can only be removed by mechanical means.

10. LIMITATIONS

- Do not apply over existing coatings.
- Not UV color stable (for internal or protected use only).
- Do not apply on falling temperatures.
- Ensure moisture vapor pressure does not build up beneath coating.

11. QUALITY CONTROL & INSPECTION

Item	Inspection Method	Acceptance Criteria
Surface Preparation	Visual / Profile check	Clean, sound, laitance-free
Mixing Ratio	Weight check	17:3 (A:B)
DFT	DFT/WFT gauge	400 microns total
Visual Finish	Visual inspection	Smooth, pinhole-free
Cure Time	Time & temperature	≥ 7 days before water contact

12. HEALTH, SAFETY & ENVIRONMENT

- Ensure confined space permit and gas testing before entry.
- Provide forced ventilation where required.
- Wear full PPE at all times.

- Avoid skin and eye contact.
- Dispose of waste material according to local environmental regulations.
- Refer strictly to SDS before use.

13. STORAGE & HANDLING

- Store in original sealed containers.
- Storage temperature: 5°C – 30°C.
- Protect from moisture and direct sunlight.
- Shelf life: 12 months from date of manufacture.