Technical Data Sheet

BC ECR EPS

Chemical Resistant Epoxy Polysulphide Coating

1). Product Description

BC ECR EPS is a high-performance, two-component, solvent-free epoxy polysulphide coating system designed to protect concrete and steel surfaces against a wide range of aggressive chemicals and mechanical abrasion.
It forms a dense, durable, waterproof and chemically resistant lining suitable for horizontal and vertical applications in industrial environments and wastewater structures.

2). Uses

- Abrasion-resistant protective coating in industrial floors and manufacturing facilities
- Tanks, pits, and sumps in sewage and wastewater treatment plants
- Lining of non-potable water structures, pipes, and pumping stations
- Chemical containment areas, effluent channels, and secondary containment bunds
- Protective coating for concrete, steel, and masonry substrates

3). Features & Benefits

- Excellent chemical and abrasion resistance
- Provides a waterproof, dense, and durable barrier
- Solvent-free formulation – low VOC, environmentally safe
- No primer required on prepared concrete
- Easy to apply by brush, roller, or trowel
- Non-sag consistency for vertical applications
- High adhesion to concrete and steel
- Excellent hardness and impact resistance

4). Technical Properties

Property	Typical Value	Test Method / Remarks
Base Composition	Epoxy Polysulphide	–
Appearance / Color	Grey	Smooth semi-gloss finish
Mixing Ratio (A: B by weight)	4:01	–
Density (Mixed)	~1.40 ± 0.05 kg/L @ 25°C	ASTM D1475
Solid Content (by weight)	~100%	ASTM D1644
Shore A Hardness	~95	ASTM D2240
Shore D Hardness (28 days)	≥ 60	ASTM D2240
Abrasion Resistance	~12 mg loss (CS-10 / 1000 g / 500 cycles)	ASTM D4060
Adhesion Strength to Concrete	≥ 1.5 N/mm² (concrete failure)	ASTM D4541
Water Tightness (5 bar / 72 h)	No Penetration	DIN 1048-5
Service Temperature Range	+10°C to +50°C	–
Chemical Resistance	Excellent against wide range of industrial chemicals	Consult BC Technical Dept.

5). System Information

System Type	Coating Thickness	Consumption
BC ECR EPS	2 coats × 250 µm DFT	~350 g/m² per coat

(Actual consumption may vary depending on substrate porosity and application method.

6). Application Data

Property	Details
Pot Life (25°C)	~30 minutes
Waiting Time Between Coats	~24 hours
Full Cure / Ready for Service	~7 days @ 25°C
Ambient Temperature	+10°C to +40°C
Substrate Temperature	+10°C to +40°C
Relative Humidity	Max. 80% RH
Substrate Moisture Content	≤ 4% (no rising damp)
Dew Point	Substrate ≥ 3°C above dew point

Surface Preparation

- Substrate must be sound, clean, dry, and free from dust, oil, grease, coatings, and laitance.
- Prepare concrete surfaces by grit blasting, grinding, or scarifying to achieve a roughened profile.
- Remove all loose or weak concrete; repair voids or blowholes with an epoxy-based repair mortar.
- Ensure surface is free from rising moisture before coating application.

Mixing

1. Pre-stir Part A (Resin) thoroughly before use.
2. Add Part B (Hardener) completely into Part A.
3. Mix continuously for 2–3 minutes using a slow-speed drill (300–400 rpm) until uniform.
4. To ensure uniformity, transfer mixed material to another clean container and remix briefly.
5. Avoid over-mixing to minimize air entrapment.

Application Method

- Apply using brush, roller, or airless spray in two coats at the recommended coverage rate.
- Ensure the first coat is tack-free before applying the second coat (typically 24 hours at 25°C).
- Do not apply below +10°C or above 80% RH.
- Protect freshly coated surfaces from moisture, condensation, or rain for at least 24 hours.

Cleaning of Tools

Clean all tools and equipment with a suitable epoxy thinner or solvent immediately after use.

7). Packaging

Component	Packaging Type	Net Content
Part A	Metal Container	16 kg
Part B	Metal Container	4 kg
Total Set	–	20 kg (A+B)

8). Shelf Life & Storage

- Shelf Life -12 months
  Storage Conditions - Store in dry, shaded area between +5°C and +30°C in original sealed containers.
- Protect from direct sunlight, frost, and moisture.

9). Health & Safety

- Refer to the Safety Data Sheet (SDS) for detailed information on safe handling, storage, and disposal.
- Use with adequate ventilation and appropriate PPE (gloves, goggles, respirator).