Technical Data Sheet

BC Line GRP Resin

High-Performance Polyester Lining System

1. Product Description

BC Line GRP Resin is a high chemical-resistant, three-component polyester lining system formulated with reactive polyester resin, inert fillers, and fiberglass reinforcement.

It is designed for internal lining of chemical storage tanks, pipelines, steel structures, concrete containment areas, and equipment operating in highly corrosive environments.

The system offers exceptional resistance to aliphatic and aromatic solvents, concentrated organic and inorganic acids, and aggressive industrial chemicals.

2. Features & Advantages

- Outstanding resistance to aggressive chemicals, acids & solvents
- High mechanical strength with excellent durability
- Suitable for immersed & atmospheric conditions
- Excellent adhesion to steel and concrete substrates
- Reinforced laminate system for maximum protection
- High impermeability & long-term corrosion resistance
- 100% reactive solids – low shrinkage, high build
- Fast curing and easy installation

3. Recommended Film Build

Basecoat (Base + Talcum Powder)

- Thickness: 150 – 300 µm DFT

Laminate Layers

- Two layers chopped strand mat
  - Thickness: 1600 – 1800 µm DFT
- Surface mat with Base Resin
  - Thickness: 150 – 200 µm DFT

Topcoat (Base only)

- One or two layers

4. Engineering & Physical Data

Property	Value
Color	Translucent
Gloss Level	Semi Gloss
Volume Solids	100% reactive (≈85% converts to solid)
Specific Gravity (Mixed)	1.05 kg/L
VOC (EPA Method 24)	429 g/L
Elongation at Break	≥ 2.5% (BS 2782)
Barcol Hardness	≥ 40 (ASTM D2583)
Heat Distortion Temperature	75°C ±5 (BS 2782)
Acid Value	25-30 MG koh/G (bs 2782)

5. Surface Preparation

Steel (Carbon Steel)

- Abrasive blast clean to Sa 2½ (ISO 8501-1:2007) or SSPC-SP6
- Recommended: SSPC-SP10, surface profile 75–100 µm
- If oxidation occurs after blasting → re-blast
- Remove all visible defects, sharp edges, weld splatter, etc.

Concrete

- Abrasive blasting or mechanical scarification
- Concrete must be fully cured, dry, free from oil, dust, and contaminants
- Conduct moisture test: ASTM D4263 (Plastic Sheet Test)

- If moisture detected → re-test until dry

Minimum application temperature: 10°C
Maximum relative humidity: 80%
Surface temperature must be ≥3°C above dew point.

6. Application Guide

Mixing Ratio (by weight)
Base : Accelerator : Hardener = 100 : 0.4 : 1.8

- Mix Base + Accelerator thoroughly
- Add Hardener and mix until uniform
- Do not thin

Drying & Curing Profile

Condition	25°C	35°C
Surface Dry	1 hour	1 hour
Through Dry	4 hours	3 hours
Dry to Recoat (min)	4 hours	3 hours
Dry to Recoat (max)	7 days	7 days
Full Cure	7 days	7 days

Drying may vary depending on film build, ventilation, and humidity.

Application Notes

- When substrate temperature exceeds 35°C, overcoat as soon as "hard dry".
- Avoid direct mixing of accelerator with MEKP or any peroxide catalyst: danger of violent reaction.

7. Coverage

Coverage varies by layer type.

- Basecoat: 0.40 kg/m²
- Laminate: 2.20 kg/m²
- Surface mat layer: 0.30 kg/m²
- Topcoat: 0.15 – 0.20 kg/m² (per coat)

8. Packaging

Component	Quantity
Base Resin	20 kg
Accelerator	0.08 kg
Hardener	0.36 kg

9. Storage

- Store in original sealed containers
- Keep between 10°C – 25°C
- Protect from heat, direct sunlight, sparks and ignition sources
- Avoid temperature cycling (may cause gelling)
- Ensure good ventilation during storage

10. Shelf Life

- Base: 6 months @ 25°C
- Accelerator: 6 months @ 25°C
- Hardener: 6 months @ 25°C

11. Health & Safety

- Refer to SDS before handling
- Use gloves, goggles, and protective clothing
- Ensure adequate ventilation
- Avoid skin contact and inhalation
- Never mix accelerator with peroxide catalysts directly — explosion hazard