



TECHNICAL DATA SHEET

BC Repair 101

Single Component, Micro silica & Latex Modified, Non-Sag Repair Mortar

1). Product Description

BC Repair 101 is a one-component, cement-based, micro silica and latex-modified, non-sag repair mortar. It is specially designed for trowel-applied vertical and overhead structural repairs requiring high performance, superior adhesion, and long-term durability.

2). Features & Benefits

- One-component formulation for easy mixing and application.
- High bond strength ensures excellent adhesion to concrete substrates.
- Normal setting time improves workability and reduces wastage.
- Micro silica & latex modification enhances mechanical performance.
- Non-sag properties suitable for vertical and overhead applications.
- Chloride-free, minimizing the risk of steel reinforcement corrosion.
- Highly impermeable, protecting against carbonation and chloride ingress.
- Excellent resistance to chloride ions, water, and acid gases.

3). Technical Information

Compressive Strength (ASTM C109, modified, 50 mm cubes)

Age	Strength
1 day	2,500 psi (17.2 MPa)
3 days	3,500 psi (24.1 MPa)
7 days	4,500 psi (31.0 MPa)
28 days	5,500 psi (37.9 MPa)



Bond Strength (ASTM C882, modified, Slurry Coat)

Age	Strength
1 day	1 100 psi (7.5 MPa)
3 days	1,500 psi (10.3 MPa)
7 days	2,000 psi (13.8 MPa)
28 days	2200 psi (15.2 MPa)

Flexural Strength (ASTM C348)

Age	Strength
1 day	500 psi (3.4 MPa)
3 days	600 psi (4.1 MPa)
28 days	900 psi (6.2 MPa)

Tensile Strength (ASTM C496)

Age	Strength
1 day	230 psi (1.6 MPa)
7 days	400 psi (2.7 MPa)
28 days	610 psi (4.2 MPa)

4). Other Properties:

- Working Time: ~30 minutes
- Initial Set: ~1 hour
- Final Set: ~2.5 hours
- Water Absorption (ASTM C642): ~2%
- Coefficient of Thermal Expansion: $8-12 \times 10^{-6} /^{\circ}\text{C}$
- Alkali Content: ~2.8 kg/m³
- Chemical Resistance: Excellent resistance to chloride ions, water, and acid gases



5). Coverage:

- One 25 kg bag of BC Repair 101 will cover approximately 1.0 m² at an average thickness of 13 mm.
- Coverage range: 6 mm to 50 mm thickness, depending on repair depth and substrate condition.

6). Directions for Use

Surface Preparation

- Substrate must be clean, sound, and roughened.
- Remove oil, dust, paint, laitance, and unsound concrete.
- Use mechanical methods such as bush hammering, sandblasting, or jackhammering to achieve a minimum profile of 3.2 mm and expose coarse aggregate.
- Final cleaning with vacuuming or pressure washing is recommended.

Reinforcement Preparation

- Exposed reinforcing steel should be cleaned of rust and scale, preferably by sandblasting to white metal.
- Apply an anti-corrosion primer (e.g., zinc-rich primer) before repair mortar placement.

Bonding

- Prime the prepared substrate with a slurry coat of BC Repair 101.

Mixing

- Use a low-speed drill with a jiffy-type paddle for small mixes, or a mortar mixer for large quantities.
- Add the recommended amount of water to the mixer first, then slowly add the dry powder.
- Mix for at least 5 minutes until a uniform, lump-free consistency is achieved.

Placement

- Apply mixed mortar immediately after preparation.
- Trowel firmly into place, ensuring full contact with substrate and reinforcement.



7). Packaging

- 25 kg moisture-resistant bags

8). Shelf Life & Storage

- 12 months from date of manufacture in original unopened packaging.
- Store in a cool, dry place, protected from direct sunlight and moisture.

9). Safety Precautions

- Contains Portland cement; may cause skin and eye irritation.
- Use gloves, goggles, and protective clothing during application.
- In case of contact, wash immediately with clean water.
- Refer to Material Safety Data Sheet (MSDS) for further details.

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.

