Technical Data Sheet

BC Epoxy Putty 4000

High-Strength, Two-Component Epoxy Repair & Adhesive Putty

1). Product Description

BC Epoxy Putty 4000 is a high-strength, non-slumping, two-component epoxy putty system formulated for durable structural repairs and bonding applications. It provides excellent adhesion to concrete, steel, masonry, and various other substrates. The cured compound exhibits exceptional toughness, resilience, and chemical resistance — ideal for horizontal, vertical, and overhead applications.

2). Features / Benefits

- High mechanical strength with excellent bond to concrete and steel.
- Non-slump and non-shrink, suitable for vertical and overhead repairs.
- Excellent chemical and abrasion resistance.
- Forms a stiff yet easily workable compound.
- Excellent adhesion even on damp surfaces.
- Can be used as an epoxy-based repair, grouting, or bedding material.
- Resistant to impact, oils, mild acids, alkalis, and a wide range of industrial chemicals.
- Excellent resistance to UV radiation and environmental exposure.
- Fast curing and high durability.

3). Primary Applications

- Structural crack repairs in decks, slabs, beams, and concrete elements.
- General adhesive for bonding metal, ceramic, stone, and concrete.
- Anchoring of reinforcement bars, anchor bolts, and steel plates.
- Bedding of heavy machinery, base plates, and precast elements.
- Sealing of dry cracks, gaps, and pinholes around pipes and fittings.
- Surface leveling and defect repair prior to application of epoxy coatings or lining systems.

4). Technical Data

Property	Typical Value	Test Method / Remarks
Bond Strength	≥ 6 MPa	ASTM C882
Compressive Strength	5600 psi (≈ 39 MPa)	ASTM D695
Flexural Strength	1600 psi (≈ 11 MPa)	ASTM D790
Tensile Strength	725 psi (≈ 5 MPa)	ASTM D638
Density	1.7 g/cm³	—
Toxicity	Non-Toxic	—
Chemical Resistance	Excellent against sewage, oils, fats, ammonia, and formaldehyde. Resistant to 10% nitric acid (good) and 5% acetic acid (limited).	—
Pot Life	30 – 40 min @ 25°C	—
Full Cure	7 days @ 25°C	—

5). Directions for Use

Surface Preparation

- The substrate must be sound, clean, and free from oil, grease, dust, laitance, and other contaminants.
- Mechanically prepare the surface by scarifying, shot blasting, or grinding to expose sound concrete and provide a minimum surface profile of 3 mm.
- All residues and dust must be removed using a vacuum cleaner or compressed air.
- Acid etching may be used only where mechanical preparation is impractical, followed by thorough washing and complete drying.

Mixing

- Mix Part A (Resin) and Part B (Hardener) in the specified ratio until a uniform color and consistency are achieved.
- Always add Part B into Part A, not the reverse.
- Mix using a slow-speed drill (400–600 rpm) fitted with a mixing paddle for at least 3 minutes.
- Avoid entraining excessive air during mixing.
- The mixed epoxy must be used within its pot life.

Application

- Apply the mixed material immediately after mixing using a trowel, spatula, or putty knife.
- For filling cracks or joints, press firmly into place to ensure full contact.
- When used as a leveling compound, trowel to the desired thickness using a minimum of solvent on the tool to aid workability.
- Ensure the applied layer is free from air pockets or voids.
- Protect the applied surface from moisture, dust, and traffic until cured.

Curing

- Initial set typically occurs within 6–8 hours @ 25°C.
- Full cure is achieved after 7 days, depending on ambient temperature and humidity.

6). Packaging

- 3 kg and 50 kg kits (pre-measured two-component system).

Color

- Standard color: Grey
- Other colors available upon request.

7). Shelf Life & Storage

- 12 months in unopened containers under dry, shaded conditions at temperatures between 10°C and 35°C.
- Protect from direct sunlight, frost, and moisture.

Clean-Up

- Clean all tools and mixing equipment immediately after use with a suitable epoxy thinner or solvent before hardening.
- Do not allow material to cure on tools.

8). Health & Safety

- Refer to the Safety Data Sheet (SDS) for detailed information on handling, storage, and disposal.
- Use gloves, safety goggles, and protective clothing during application.
- Ensure adequate ventilation in confined areas.