

FUERZA REBOND

STEEL REINFORCEMENT PROTECTION COATING & OLD TO NEW CONCRETE BONDING AGENT

FUERZA REBOND is a **two-component, solvent-free epoxy-based protective coating** formulated for **corrosion protection of steel reinforcement** and as a high-performance **bonding agent between existing and new concrete**. The system exhibits excellent tolerance to **moisture during substrate preparation and curing**, while developing an **insoluble, chemically stable matrix upon cure**.

After curing, **FUERZA REBOND** develops **bond strength exceeding the tensile strength of conventional concrete**, ensuring cohesive substrate failure rather than adhesive debonding. Its **non-shrink formulation** provides a uniform, dimensionally stable, and **stress-free bond**, delivering durable adhesion under demanding structural conditions.

ADVANTAGES

- **High Mechanical Strength:** Develops exceptional tensile, compressive, and bond strength for demanding structural applications.
- **Dual-Function Protection:** Combines reinforcement corrosion protection and concrete-to-concrete bonding within a single high-performance system.
- **Superior Adhesion:** Provides excellent adhesive compatibility and bond strength to both concrete and steel substrates.
- **Non-Shrink Performance:** Maintains dimensional stability during curing, eliminating shrinkage-induced stresses and loss of contact.
- **Moisture Tolerance:** Can be applied under **damp substrate conditions** while maintaining reliable curing and adhesion.
- **Enhanced Durability:** Provides long-term resistance to mechanical, environmental, and service-related degradation.
- **Chemical Resistance:** Exhibits high resistance to chemical attack and aggressive service environments.
- **Extended Service Life:** Designed to provide durable, long-term protective and bonding performance.
- **Pre-Weighed Packaging:** Supplied in factory-proportioned, pre-weighed components to facilitate accurate mixing and consistent application performance.

RECOMMENDED APPLICATIONS

- Old-to-new concrete bonding for structural repair and rehabilitation.
- Bonding of floor toppings, overlays, and repair mortars.
- Corrosion protection of steel reinforcement.
- Suitable for interior and exterior concrete structures.
- Applicable to parking decks, bridges, and marine structures.
- Suitable for retaining walls and parapet structures.

TECHNICAL INFORMATION

Color: Grey
Consistency: Brush-able coating
(Available in two grades)

FUERZA REBOND

Pot life: 30 minutes
Initial hardness: 3-4 hours
Full cure: 7 days

FUERZA REBOND LPL

Pot life: 5-7 hours
Initial hardness: 48 hours
Full cure: 7 days

TECHNICAL STANDARDS & CLASSIFICATION

Conforms to ASTM C881 requirements for Type II, Grade 2, Classes B and C.

APPLICATION PROCEDURE

Surface Preparation:

All substrates shall be **sound, clean, dry, and free from contaminants** that may adversely affect adhesion. Remove all loose or friable material, laitance, dust, curing compounds, floor hardeners, oil, grease, fats, bitumen, rust, paint, and other surface impurities.

- **Concrete substrates:** Remove laitance, weak concrete, and friable material by mechanical scarification, grit blasting, chipping, or scrubbing until a sound, cohesive substrate is exposed.
- **Glossy or smooth surfaces:** Mechanically abrade to provide an adequately profiled surface for optimum mechanical adhesion.
- **Oil, grease, or fats:** Degrease thoroughly before commencing any other surface-preparation operation.
- **Curing compounds:** Ensure all curing compounds have either completely disintegrated or been mechanically removed. Application shall only proceed onto a clean, dry, and dust-free surface.
- **Mould, algae, and lichen:** Remove all biological growth and subsequently treat the affected areas with a suitable fungicidal wash.
- **Mould-oil contaminated concrete:** Thoroughly degrease followed by grit blasting or mechanical scarification to eliminate the contaminated surface layer.
- **Steel surfaces:** Remove corrosion products and rust by abrasive blasting, wire brushing, or other suitable mechanical means until a sound metallic surface is obtained.

Substrate Condition & Temperature:

New concrete shall be sufficiently cured to ensure that **shrinkage and moisture movement are reduced to acceptable levels** prior to application. Substrate and ambient conditions shall be suitable for the application and subsequent curing of FUERZA REBOND.

Component Mixing:

FUERZA REBOND is supplied as a **two-component system comprising BASE and REACTOR components**.

1. Transfer the **entire contents of the smaller FUERZA REBOND REACTOR COMPONENT** into the larger container containing the **FUERZA REBOND BASE COMPONENT**.
2. Mechanically mix using a **slow-speed electric drill fitted with a suitable paint-mixing paddle**, or manually using a robust palette knife.
3. Continue mixing until a **completely homogeneous and uniform mixture** is obtained, typically requiring approximately **3 minutes**.
4. Scrape the sides and bottom of the container during mixing to ensure complete incorporation of both components.
5. **Partial mixing is strictly prohibited**; the complete contents of both components shall be mixed together to maintain the specified formulation ratio.
6. **Do not dilute or thin FUERZA REBOND** with solvents or other materials.

Application:

Apply the thoroughly mixed FUERZA REBOND uniformly over the prepared substrate using a **clean, short-haired paint brush or laying-on trowel**. Ensure continuous and even coverage across the entire surface without leaving uncoated areas or excessive material accumulation.

Overcoating Interval:

Following application, FUERZA REBOND shall be allowed to stand for the required **pre-overcoating interval**. The actual interval is dependent upon substrate temperature and prevailing environmental conditions.

Typical waiting periods are:

<u>Temperature</u>	<u>Typical Overcoating Interval</u>
25°C	Approximately 60 minutes
40°C	Approximately 45 minutes

Protection after application:

The freshly applied FUERZA REBOND shall be **protected from dust, dirt, moisture, and other forms of contamination** throughout the required waiting period prior to overcoating. Particular attention shall be given to **horizontal surfaces**, where airborne and surface contaminants can readily accumulate.

Temperature limitations:

Low ambient and substrate temperatures significantly **retard the setting and curing kinetics** of FUERZA REBOND and may consequently extend the development of its final performance characteristics. Application during cold-weather conditions should therefore be avoided wherever practicable.

Although FUERZA REBOND is capable of curing at reduced temperatures, an approximate temperature range of **5°C–10°C** may be regarded as the minimum practical range for satisfactory application to **vertical rendering surfaces without shuttering**, subject to site conditions and substrate suitability.

Equipment Cleaning & Maintenance:

All application equipment shall be cleaned immediately after use to prevent material build-up and hardening.

- While FUERZA REBOND remains **wet or tacky**, clean tools and equipment thoroughly using **CLEANING SOLVENT No. 2**.
- Once the material has fully cured and attained a **hard, chemically resistant state**, solvent cleaning is no longer effective.
- Fully hardened residues can only be removed by **mechanical chipping, scraping, or controlled burning**, as appropriate to the equipment and site conditions.

COVERAGE

FUERZA REBOND provides an approximate coverage rate of **2.5–3.0 m²/kg**, depending on substrate profile, surface texture, porosity, and application conditions.

PACKAGING & STORAGE

FUERZA REBOND is supplied in **5 kg complete units**, comprising the Base Resin and Reactor Components. Store in a **covered, dry environment**, protected from direct sunlight, moisture, and extreme temperature variations; in tropical climates, storage in an **air-conditioned environment** is recommended. Improper storage may result in **premature deterioration of the product or packaging**, potentially affecting performance. For specific storage, handling, and disposal requirements, consult the FUERZA Technical Services Department.

HEALTH & SAFETY PRECAUTIONS

As with all chemical products, FUERZA REBOND shall be **handled, applied, and stored with appropriate safety precautions**. Avoid direct contact with the **eyes, skin, mouth, and foodstuffs**, and ensure adequate ventilation to prevent exposure to vapours until the material has fully cured or dried. In the event of contact with the eyes or skin, **immediately rinse thoroughly with clean water and seek medical attention where necessary**. If accidentally swallowed, obtain **immediate medical assistance**. For comprehensive information regarding safe handling, personal protective equipment, first-aid measures, and disposal, refer to the relevant **Material Safety Data Sheet (MSDS/SDS)**.

