

FUERZA BONDEX

EPOXY BONDING AGENT

FUERZA BONDEX is a high-performance, permanent **epoxy bonding adhesive** designed for internal and external bonding of renderings, granolithic toppings, and concrete-to-concrete interfaces. The system tolerates limited substrate moisture during application and curing and becomes **water-insoluble upon full cure**. It develops bond strength exceeding the tensile capacity of conventional concrete, while its **non-shrink formulation** ensures uniform, dimensionally stable, and stress-free adhesion.

APPLICATIONS

- **Steel substrates** — for durable structural and non-structural bonding.
- **Glazed ceramic surfaces and bricks** — where high adhesion to low-porosity substrates is required.
- **Ceramic and quarry tiles** — for permanent adhesive bonding applications.
- **Terrazzo tiles and flooring** — for rehabilitation and bonding of existing surfaces.
- **Existing granolithic paving** — including smooth, worn, or weathered surfaces.
- **Existing concrete substrates** — for concrete-to-concrete bonding and refurbishment.
- **Engineering and semi-engineering bricks** — for high-strength masonry bonding applications.

ADVANTAGES

- High mechanical and tensile bond strength
- Non-shrink formulation with dimensional stability
- Moisture-tolerant during application and curing
- High durability under demanding service conditions
- Excellent resistance to chemical and aggressive environments
- Factory pre-weighed components for accurate proportioning and consistent performance

TECHNICAL INFORMATION

Mixed density at 25° C:	1485 kg/m ³
Pot life:	60 min
Tack free time:	2 hours
Full cure:	7 days

COVERAGE

Theoretical coverage is approximately **2.0–2.7 m²/kg**, depending on **substrate profile, surface porosity, and application thickness**.

STANDARDS COMPLIANCE

FUERZA BONDEX conforms to **ASTM C881/C881M, Type II, Grade 2, Classes B and C**, meeting the specified requirements for epoxy-resin bonding systems used in concrete applications.

APPLICATION PROCEDURE

Surface Preparation:

All substrates shall be **sound, clean, dry, and free from contaminants** that may impair adhesion, including loose particles, laitance, dust, curing compounds, floor hardeners, oil, grease, bitumen, and paint. Smooth or glossy surfaces shall be mechanically abraded to develop an appropriate bonding profile.

Oil, grease, and similar contaminants must be completely removed prior to mechanical preparation. Weak, friable, or defective concrete shall be removed by **chipping, grit blasting, or mechanical scarification** until a sound substrate is exposed. Laitance shall be eliminated by suitable mechanical methods or, where appropriate, acid etching. Mould, lichen, and algae shall be removed and treated with a suitable fungicidal wash.

New concrete shall be sufficiently cured to ensure that **shrinkage and moisture movement are adequately stabilized**. Surfaces contaminated with mould-release oils shall be thoroughly degreased and mechanically prepared. All curing compounds must be fully disintegrated or removed, leaving a **clean, sound, dust-free substrate** prior to application.

Mixing:

Transfer the complete contents of the **FUERZA BONDEX Reactor Component** into the larger container containing the **FUERZA BONDEX Base Component**. Thoroughly mix using a robust palette knife or **low-speed mechanical mixer with a suitable paddle** until a completely homogeneous mixture is obtained, typically within approximately **3 minutes**.

Do not partially mix the components and **do not dilute or thin FUERZA BONDEX**.

Application:

Apply the mixed FUERZA BONDEX uniformly over the prepared substrate using a **clean, short-nap brush or laying-on trowel**, ensuring complete and consistent coverage.

Following application, allow the epoxy bonding layer to stand before overcoating. Typical waiting periods are approximately **60 minutes at 25°C** and **45 minutes at 40°C**, subject to prevailing substrate and environmental conditions. Protect the applied material from dust, moisture, and other contamination during this period, particularly on horizontal surfaces.

Application Parameters:

- **Mixed density:** Approximately **1485 kg/m³** at **25°C**
- **Pot life:** Approximately **60 minutes**
- **Tack-free time:** Approximately **2 hours**
- **Full cure:** Approximately **7 days**
- **Full cure at 25°C:** Approximately **9.5 hours** (*where applicable to the specified curing condition*)
- **Full cure at 40°C:** Approximately **5.5 hours** (*where applicable to the specified curing condition*)

Equipment Cleaning:

Clean tools and equipment using **Cleaning Solvent No. 2** while FUERZA BONDEX remains wet or tacky. Once fully cured, the material can only be removed by **mechanical methods such as chipping or thermal removal**.

TEMPERATURE CONDITIONS

Low temperatures retard the **setting and curing kinetics** of FUERZA BONDEX. Application during cold-weather conditions should therefore be avoided where practicable. For vertical rendering without shuttering, the minimum recommended application temperature is approximately **7–10°C**, at which curing may proceed satisfactorily.

HEALTH & SAFETY PRECAUTIONS

Handle and store **FUERZA BONDEX** in accordance with standard chemical safety practices. Avoid contact with **eyes, skin, mouth, and foodstuffs**, and prevent exposure to vapors until the material is fully cured or dried. In case of contact, immediately rinse affected areas thoroughly with clean water. If accidentally ingested, seek **immediate medical attention**. For detailed safety and handling information, refer to the current **Safety Data Sheet (SDS)**.

PACKAGING & STORAGE

FUERZA BONDEX is supplied in **5 kg units**, comprising the **Base Resin and Reactor Components**. Store under cover, protected from direct sunlight and extreme temperature fluctuations. In tropical climates, maintain storage in a **temperature-controlled, air-conditioned environment**. Improper storage conditions may cause premature deterioration of the product or packaging. For specific storage and disposal requirements, consult **FUERZA CONSTRUCTION CHEMICALS**.

