

CEMTEC WR44

DAMP TOLERANT THIXOTROPIC EPOXY BONDING AGENT

CEMTEC WR44 is a high strength, non-slumping, two component epoxy bonding and coating system. This system is tough and resilient when compared to concrete. It has excellent characteristics for a variety of bedding, gap filling and concrete repair applications. It is widely used for coating and protecting concrete and steel substrates with dampness. It is used as a segmental bridge adhesive for bridge construction. It is also used for grouting applications like securing bolts into walls, dowel bars anchoring, filling bolt pockets and fixing of surface ports for crack injection etc. It is easily workable and can be applied by either trowel, spatula or knife. It is resistant to a wide range of commonly met corrosive chemicals like acids, alkalis, salts, oils, greases and petroleum etc. It is widely used for repairing surface defects or honeycombing concrete in horizontal, vertical and overhead applications.

PRIMARY APPLICATIONS

- Segmental concrete bridges
- Ware houses
- Dairies
- Service stations
- Chemical plants
- Food processing and rendering plants
- Factories
- Garages and car repair facilities
- Piers, decks, and other concrete members in coastal areas

FEATURES/BENEFITS

- Forms non-slump, non-shrink, epoxy bedding system.
- Forms a easily workable compound.
- Resistant to impact and a wide range of chemicals.
- Has strong adhesion to damp and dry concrete, and steel surfaces.
- Can be used for wide range of applications like bedding, grouting, crack filling and repair of surface defects in horizontal, vertical and overhead applications.

SPECIFICATIONS/COMPLIANCES

The epoxy bedding system **CEMTEC WR44** complies with ASTM C 881 Type 1, Grade 3

Classes B & C. **CEMTEC WR44** is tested in accordance with FIP procedures.

PACKING / YIELD:

CEMTEC WR44 is packed as 6 kg kits. Each 6 kg kit will yield about 4.50 liters.

TECHNICAL INFORMATION

Typical Engineering Data

The following information was developed under laboratory conditions.

Compressive strength

(ASTM D 695) : >75 N/MM²

Bond strength

: Greater than that of the concrete

Pot life @ 25°C

: 1 hour 15 minutes

(FIP 5.1) @ 40°C

: 45 minutes

Open time

(FIP 5.2) @ 25°C

: 2 hours

Thixotropy (sag flow)

(FIP 5.3)

: Meets the requirements

Squeezibility (FIP 5.4)

: Meets the requirements

Shrinkage (FIP 5.7)

: <0.3% at 7 days

Water absorption

: <0.15% at 7 days

Solvability in water

(FIP 5.9)

: 0.04%

Heat resistance

(ASTM D 648)

: No sign of dripping & sagging at 50°C.

Tensile bonding strength

(FIP 5.14)

: Concrete failure; With no failure in bonding agent

Shear strength (FIP 5.15): 13 N/MM²

DIRECTIONS FOR USE:

Old concrete must be clean and rough. All oil, dirt debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a scabler, bushhammer, shotblast or scarifier which will give a surface profile of a minimum (3 mm) and expose the large aggregate of the concrete. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

Acid etching is acceptable only when Mechanical preparation is impractical. It is recommended only contractors experienced in the acid etching process use this means of the surface preparation. The salts of the reaction must be thoroughly pressure washed away.

The steel surfaces shall be shotblasted to be free from rust and shall be Sa 2½ Standard.

NOTE: Even with proper procedures, an acid etched surface may not provide as strong a bond as a mechanically prepared surface.

Mix part A and part B (resin & hardener) for 3 minutes using a drill and mixing prop. For ease of mixing, add the part B to part A (not the reverse). The epoxy must be well mixed to ensure proper chemical reaction.

Fill routed out cracks and cut joints with **CEMTEC WR44**, then apply **CEMTEC WR44** over the rest of the floor or any other concrete members.

Segmental Bridge Adhesive:

The bonding agent may be applied to one but more frequently to both of the concrete surfaces to be joined together.

The bonding agent should be spread on the surface with the help of a spatula / trowel to a thickness of about 2mm for single surface application and about 1 mm for application to both surfaces.

For protecting structures under immersed conditions, **CEMTEC WR44** can be applied on a damp concrete or steel surfaces at 1 mm thickness followed by impregnating the same with fiber mesh or cloth followed by application of **CEMTEC WR44**.

CLEAN-UP: Clean all tools and equipment with CEMTEC SOLVENT. Do not allow material to harden on the equipment.

PRECAUTIONS/LIMITATIONS:

- Epoxy components may cause irritation. Avoid contact with eyes and skin.
- Store under cover out of direct sunlight and protect from extremes of temperature.
- Solvents are Flammable. Keep away from heat, sparks, open flame, or lighted cigarettes. Use explosion-proof application equipments.

TD/PDS/0607/B

QUALITY STATEMENT

CMCI manufacture its products at their manufacturing facility in Saudi Arabia as per the Quality Procedures certified to conform with Quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high performance construction products. CMCI also offers full technical field support to consultants, Architects, Contractors, applicators and End Users

The Technical Specification information and recommendation given are based on the current technical knowledge and the user or his representative is recommended to check the suitability of the product. CMCI reserves the right to amend the technical characteristic of the product as part of ongoing research and development. As the work execution is beyond the direct and continuous control of CMCI no guaranty and or responsibility is assumed on the performance of work completion executed with use of our products.