

CHEMBOND™

High performance latex modifier for cement

Product Description

CHEMBOND™ is a synthetic latex which, when added to adhesives, mortar and concrete mixes, enhances their basic properties. The cured compound has exceptional adhesion to brick, concrete, ceramic tiles and to most other building materials such as timber, many metals, expanded polystyrene foam and rigid polyurethane foam. CHEMBOND™ increases flexural strength.

Product Uses

CHEMBOND™ is used to repair or patch cementitious, brick and other appropriate substrates before the installation of GCP waterproof membrane systems. It is used to produce premium quality, high performance polymer modified cement mixes for external or internal applications including:

- Adhesive binder for render systems
- Adhesion slurry coat over Aquagard M polyurethane membranes
- Repair of concrete and masonry
- Thin topping or levelling screeds
- Moisture proof sealer for concrete, render, FC and CFC
- Bonding agent for CRYSTALSEAL™ slurry
- Waterproof grouts and render coatings

Product Advantages

- No toxic or hazardous ingredients
- Water clean-up
- Resists spalling – moves with substrate
- Boosts tensile and compressive strength
- Increases flexural and adhesive strength
- Resists acids, alkalis and fats
- Excellent exterior durability
- Totally waterproof
- Multi-purpose and easy to use
- Single pack
- Economical with high performance
- Systems for Total Project Specification

Preparation

All surfaces must be sound, smooth, dry and free from dust, debris, oil or other contaminants. Bony concrete should be removed. Any exposed steel and porous or very smooth surfaces should be first carefully cleaned and then sealed with a slurry of CHEMBOND™:Water:Cement:Sand in the ratio of 1:1:2:1 applied by short bristled brush. Fine sand may be deleted depending on surface finish required. Porous concrete may be dampened prior to applying slurry.

Note: Application to porous substrates at elevated temperatures or in windy conditions may result in trowelling difficulties, poor surface adhesion and fine shrinkage cracking

Application

- **Renders**
 - Do not exceed 7 mm per coat. Thicker layer may cause sagging or separation from wet primer coat.
 - Scratch surface of each coat and leave for at least 6 hours before applying further coats.
 - Trowel final coat to required finish.
- **Floor Toppings**
 - Toppings based on CHEMBOND™ can be laid to any thickness (12 mm min.) depending on the sieve grading of the sand.
 - Feather edging is permissible for non-critical areas but use of 24 hr damp curing is particularly important.
- **Trowelling**
 - Use semi-dry mix – consistency must allow total compaction by methods used.
 - CHEMBOND mortar should be placed on wet priming coat, then levelled, well compacted and floated smooth – finish as required.
 - Thick toppings (>50 mm) do not require CHEMBOND additive, place topping directly onto wet CHEMBOND priming coat.

Special Use Mix Ratio

- **Moisture Sealer** – Dilute with equal parts of water and apply 1 or 2 coats 5–6m²/litre by brush or roller.
- **Waterproof Render** – Dilute CHEMBOND™ with 2 parts water and add to dry cement blend mix.
- **CRYSTALSEAL™ Waterproofing** – Mix 5 parts water to CHEMBOND – add to CrystalSeal powder to obtain required consistency.

Concrete, Mortar & Render Mix Design

- Quantity of CHEMBOND™ diluted with 5 parts of water required for 1m³ in:
- Standard Concrete – 160 – 170 litres
- Mortar/Screed – 200 litres
- Concrete Patching and Repair Mortar – 1 pbw cement to 3 pbw sand – add CHEMBOND/water 1 : 1 mix, to achieve required consistency.
- Topping < 10mm thick – 1 pbw cement to 2 pbw sand – add CHEMBOND/water 1 : 1 mix, to achieve required consistency.

- Topping < 20mm thick – 1 pbw cement to 5 pbw sharp sand – add CHEMBOND™/water 1 : 5 mix, to achieve required consistency.
- Key coat for Aquagard M PU waterproof membrane – Mix slurry of CHEMBOND™:Water:Cement:Sand in ratio 1:1:1:1 and apply with stiff bristle brush.
- Bagging render/texture – 1 pbw cement: 4 parts fine sand – add CHEMBOND™/water 1 : 2 mix, to required slurry consistency.

Packaging

CHEMBOND™ packed in 20 litre pails or 200 litre drums.

Clean up

Clean with water before final cure occurs. MULTITEK™ XYLENE may assist with the removal of partially cured product. Exercise care when using solvents. Please review all MSDS before use. Release Date: 02/11/18. The information contained in this product data sheet supersedes all previous versions.

Shelf Life

Unopened or resealed pails of CHEMBOND will have a shelf life of 2 years, when stored in a dry, cool place. Protect from frost.

PROPERTY	CHEMBOND	CHEMBOND @ 25% WT CEMENT
Adhesion to concrete (N/mm ²)	0.07	2.1
Adhesion to dry steel (N/mm ²)	0.0	2.0
Tensile strength	2.0	4.0
(N/mm ²)	56.0	50.0
Compressive strength (N/mm ²)	7.1	13.2
Flexural strength	5.2	14.3
(N/mm ²)	0.0	1.9
Flexural strength after	0.07	0.01
1 year @ 70 °C (N/mm ²)	46.9	4.0
Adhesion to concrete after	100	30

Health and Safety

For all GCP products, read the product label and Safety Data Sheet (SDS) before use. Always wear PPE detailed in the SDS for this product and comply with all risk and safety phrases detailed. SDS is readily available from GCP Applied Technologies.

Limitations

Information contained in this document does not cover all possible application scenarios or imply product suitability for an application. Please contact your local GCP representative or the GCP Technical Department for further information.

Warranties

GCP and contractors recognised by GCP as experienced in the application of GCP products will provide warranties for individual projects. Warranty periods offered are dependent on project details and complexity. Requests for very long warranty periods may necessitate increased membrane thicknesses to ensure longevity. Contact your local GCP representative for further details.

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