

# KingInsulate<sup>®</sup> C500

**Highly flexible cementitious adhesive base coat and protective top coat plaster for external wall insulating systems with high bond strength, impact and water resistance.**

## DESCRIPTION

KingInsulate C500 is a cementitious adhesive specially designed to be used for permanent fixing of thermal insulation boards to a wide range of substrates including concrete, and masonry.

KingInsulate C500 is also designed for use as a protective mortar providing a durable layer for insulation boards that is suitable to receive several types of decorative finishes.

## APPLICATIONS

- ☐ For permanent fixing of expanded and extruded polystyrene boards to walls and roofs.
- ☐ For permanent fixing of mineral wool boards to walls and roofs.
- ☐ Provides a strong and smooth layer over thermal insulation boards.
- ☐ To be used with reinforcing mesh to form a solid layer to protect insulation boards.

## ADVANTAGES

- ☐ Easy to apply.
- ☐ High water resistance.
- ☐ High impact resistance.
- ☐ Non sag.
- ☐ High compressive strength.
- ☐ High bond strength.
- ☐ High flexibility.
- ☐ Requires no primer.

## METHOD OF USE

### Substrate Preparation

- ☐ All surfaces must be clean and free from oil, grease or loose materials.
- ☐ Substrate should be dimensionally stable. Allow time for shrinkage and structural strain movements.
- ☐ The insulation board has to be firmly fixed using KingInsulate adhesives and fasteners.
- ☐ Large gaps between insulation boards must be filled with strips of insulation board to leave minimal gaps.
- ☐ All edges of the building need to be protected by PVC, aluminum or stainless steel angle bars.

## TECHNICAL PROPERTIES @25°C. W/P = 0.25:

Colour:	Grey
Fresh wet density: (mixed)	1.7 ± 0.1 g/cm <sup>3</sup>
Open time:	10 min @ 3 mm thickness
Pot life:	6 - 8 hr
Compressive strength: EN 1015-11	≥ 8.0 MPa @ 28 days
Flexural strength: EN 1015-11	≥ 2.5 MPa @ 28 days
Adhesion strength with concrete substrate: EN 1015-12	≥ 2.0 MPa
Adhesion strength with EPS boards: EN 13494	≥ 180 KPa @ 28 days
Coefficient of water absorption by capillary-C: EN 1015-18	≤ 0.1 kg/m <sup>2</sup> .min <sup>0.5</sup>
Thermal conductivity coefficient: EN 1745, A12	0.9 W/m.K

### Priming

KingInsulate C500 can be applied directly on concrete, cement plaster and masonry. In case of very porous substrates, water should be sprayed onto surface prior to the application.

### Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

Add 6.25 - 6.75 litres (for each 25 kg bags) of clean water to a clean container. The powder is then added slowly to the water while mixing continuously with low speed mixer/ drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

## APPLICATION

# KingInsulate® C500

## As adhesive:

Apply the mortar in a strip around the insulation board with a few spots in the middle. In case of a smooth base material, a toothed trowel can be used to spread the mortar on the back of the insulation board.

## As protective layer:

Apply the mortar over the fixed thermal insulation panel. Embed the precut reinforcing mesh onto the fresh applied mortar until it gets into the middle of the KingInsulate C500 layer. Smooth the surface with a long flat trowel. More than one KingInsulate C500 layer can be applied.

*Note: Mesh strips have to be overlapped by approximately 10 cm.*

## CLEANING

All tools should be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically.

## PACKAGING

KingInsulate C500 is available in 25 kg bags.

## YIELD

**As adhesive:** Approximately 6 m<sup>2</sup>/25 kg bags at 3 mm thickness.

**As protective layer:** Approximately 3.75 m<sup>2</sup>/25 kg bag at 5 mm thickness.

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

## HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative. KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All products originating from KingKrete's manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

\* Properties listed are based on laboratory-controlled tests.

® = Registered trademark of the KingKrete-Group in many countries.

## STORAGE

**KK-NA-08.1-IN-C500-R3-2601**

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

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Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.