

# KEM PROOF ULTIMATE

## High Performance Elastomeric Anti Carbonation, Water Repellent and Heat Reducing Coating

### Description

KEM PROOF ULTIMATE is a high quality acrylic emulsion based coating. It is elastomeric in nature and has good resistance to weather and sunlight. It is single component system containing inert pigments and fillers suitable for application by brush, roller or spray. It prevents chloride ion ingress and exceeds all the requirements of a coating that resists carbonation and provides a smooth, durable and water repellent coating for concrete and masonry surfaces.

### Uses

- KEM PROOF ULTIMATE is designed to bond and to protect concrete structures against carbon dioxide, air/water born chlorides.
- It is also used as elastomeric water repellent coating for asphalt, timber, fiber cements and zinc sheets.
- It may be applied to many types of substrates particularly those commonly requiring elastomeric anti carbonation and water repellent coating like concrete bridges, highways, structures in marine environments, car parking structures, commercial and industrial buildings, flat and slopping roofs.
- Acts as heat insulator and protects from damage and reduces heat conductivity.

### Advantages

- ✓ It acts as a comprehensive barrier against carbon dioxide, water, sulphates and chloride ions.
- ✓ It maintains its appearance and elastomeric performance with high recovery even after long term UV weathering.
- ✓ Easily applied by roller, brush or airless spray.
- ✓ It is capable of bridging cracks and withstands substrate cracking up to 2 mm and cyclic movement up to 1 mm.

- ✓ It acts as a barrier against salts and atmospheric gases.
- ✓ Masking imperfections in substrate.
- ✓ It protects concrete from waterborne salts.
- ✓ Water vapour can escape from the structure.
- ✓ Helps in reducing room and surface temperature, thus helping to keep room cool.

### Typical Properties

- **Physical Appearance:** White Emulsion
- **Specific Gravity:** 1.30 at 25°C.
- **Brushability:** Easily brushable
- **Water Vapour Transmission:** 30 g/m<sup>2</sup> per 24 hours
- **Chloride Ion Diffusivity:** 4.98 x 10<sup>-10</sup> cm<sup>3</sup>/s.
- **Heat Reduction:**  
Room temperature: 3 to 6°C.  
Surface temperature: 12 to 16°C.
- **Reduction in chloride ion Ingress:** 97% @ 28 days.
- **Carbon Dioxide diffusion:** R (m) value at 325 microns DFT after 2000 hrs accelerated weathering > 175 m.
- **Static Crack Bridging capability @ 200 microns dft @ 23°C (Modified ASTM C836-76):** 2 mm.
- **Reduction in water absorption (ASTM D412-02):** >82%.
- **Tensile Strength: (ASTM D412-87):** 1 N/mm<sup>2</sup>.
- **Solids by Weight:** 65 + 5 %
- **Application Temperature:** 5°C to 40°C.
- **Chemical Resistance:** Resistant to alkalis, sewage, weak acids, spillage of gasoline and diesel.
- **Elongation:** > 150%.
- **Adhesion (BS 1881):** > 1.5 N/mm<sup>2</sup>.
- **Colours:** White. Also available in grey colour upon request.

### Standards

KEM PROOF ULTIMATE complies to ASTM C 1202 - 97, BS EN 12390, ASTM D 412 - 02, ASTM C 836:1995, ASTM E 96:2000, BS 1881

### Chembond Chemicals Limited

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## Directions for use

**Surface Preparation:** All new cement-sand plasters / concrete surfaces should be allowed to cure for 6-8 weeks before surface coating. Clean the surface thoroughly. Remove all laitance, loose material, oil, grease, etc. by mechanical means such as by wire brushing and light grit blasting. Vacuum cleaning may be necessary in some cases. Any visible surface crack up to 5mm wide should be filled using KEM CRACKFILL.

Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process. It is essential to provide an unbroken coating of KEM PROOF ULTIMATE thus, all blowholes and similar surface irregularities should be filled using KEM Mortar FC and should be allowed to cure properly prior to application of KEM PROOF ULTIMATE.

**Priming:** All surfaces should be primed with KEM Prime 89 applied at a rate of 10-12 m<sup>2</sup>/ltr., to eliminate excessive suction and promote adhesion. For placed concrete, cure with a single coat application of KEM Prime 89 applied at 10-12 m<sup>2</sup>/ltr. In temperatures > 25°C, application should be made a minimum of three to four hours before applying KEM PROOF ULTIMATE coating. In cold, humid conditions 24 hours is required to ensure sufficient penetration. Any areas of glass should be masked. Plants, grass, joint sealants, asphalt and bitumen, painted areas should be protected during application.

**Application:** Apply in one or more coats of KEM PROOF ULTIMATE ensuring a continuous even film. The finish may be textured if desired.

## Packaging

KEM PROOF ULTIMATE is available in 20 ltr. Drums.

KEM Prime 89 is available in 20 ltr drums.

KEM Mortar FC is available in 25 kg bags.

## Coverage

KEM Prime 89: 10 - 12 m<sup>2</sup>/ltr.

KEM PROOF ULTIMATE – 3 to 4.5 m<sup>2</sup>/ltr/2 coats

Note: Coverage may vary depending upon the texture, porosity and condition of the surface.

## Precautions

**Cleaning:** All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage systems but should be disposed off according to local regulations.

**Protection:** All work must be protected from rain, frost until fully hardened and shaded from direct sunlight exposure.

## Safety & Handling

KEM PROOF ULTIMATE should not come in contact with skin and eyes. Wear goggles while applying. Provide adequate ventilation. Wear face masks during application.

## Storage and Shelf life

**Storage:** Stored in dry conditions at moderate temperature and humidity.

**Shelf life:** 12 months from the date manufacturing in unopened conditions.

## Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

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