

# KUT CURE WB

## Water Based Concrete Curing Compound

CUR-02-0412



### DESCRIPTION

**KUT CURE WB** is a white, low viscosity wax emulsion which incorporates a special alkali reactive emulsion breaking system. This system ensures that the emulsion breaks down to form a non penetrating continuous film immediately upon contact with a cementitious surface. This impervious film prevents excessive water evaporation which in turn permits more efficient cement hydration thus reducing shrinkage and increasing durability. The membrane once formed is designed to degrade (via a photo initiator in the clear formulation) when exposed to ultra violet light over a period of time depending on conditions of exposure.

**KUTCURE WB** is available in two grades:

- (i) **CLEAR (ASTM C309 Type 1) Class A grade** is for all normal temperate climate applications
- (ii) **WHITE PIGMENTED (ASTM C309 Type 2) Class A & CRDC - C-300 grade** contains white pigments to give light reflectance thus minimizing solar heat gain and is particularly suitable for use in hot climates. Any other pigmented versions may be made available on request, the performance and properties will be the same as white-pigmented version.

### USES

Provides a spray-on temporary membrane to retain moisture in concrete for effective curing. Used for concreting generally but especially useful for large areas of concrete construction such as runways, motorways or bridgework.

### ADVANTAGES

- Reduces drying shrinkage.
- Reduces incidence of hairline cracks.
- Single application.
- Cost effective.
- Initial white colour shows areas of use.

- Cured film is clear or white depending on the grade and is water repellent.
- Pigmented compounds give solar reflective film.
- High curing efficiency.

### STANDARDS

UK Department of Transport Specification for Road and Bridge Works: Clause 2709 (modified to remove surface water prior to application). **ASTM C309**. US Federal Specification TT -C800 A (water loss requirement) CP110: 1972 : Part 1 : Clause 6.1/6.2

### TYPICAL PROPERTIES

Colour	CLEAR	WHITE PIGMENTED
Bulk Liquid	White	White
Dry film	Clear	White

#### Specific gravity

at 20° C	0.98	1.00
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- **Minimum application temperature** : 5° C.
- **Curing efficiency:** (applicable to both grades) Water loss 0.19 kg/m<sup>2</sup> applied at 235 ml/m<sup>2</sup>, which is considerably more efficient than the maximum permissible water loss of 0.55 kg/2 in **ASTM C309** and 0.39 kg/m<sup>2</sup> in US Federal Specification TT -C800 A. 88% when applied at 280 ml/m<sup>2</sup>, Modified Department of Transport Specification for Road and Bridgework: Clause 2709.
- **Water Retention - For Both Grades:** Pass as per **ASTM C156**.
- **Membrane break down:** (applicable to both grades) After a period of approximately 28 days, the film formed on the concrete surface will begin to degrade. The rate of degradation will depend upon initial membrane thickness and the degree of exposure to ultra violet light.
- **Light reflectance:** 60-80% for white pigmented **ASTM C309**.



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## INSTRUCTIONS FOR USE

**KUT CURE WB** must be well stirred before use. **KUT CURE WB** range should be spray applied as evenly as possible to the freshly placed concrete. For horizontal surfaces the **KUTCURE WB** should be applied as soon as the initial surface sheen has disappeared from the concrete surface. In the case of formed concrete the **KUT CURE WB** should be applied immediately on removal of the formwork, i.e. at such time as the concrete is as green as possible. To assist breakdown of the **KUT CURE WB** film on vertical and formed surfaces, it is essential to dampen down the concrete with clean water prior to application.

## PACKAGING

(Both Grades) **KUT CURE WB** is available in 20 and 200 litre drums.

**Coverage:** Rate of application depends on requirements but is typically within the range 160 to 280ml/m<sup>2</sup>.

**Equipment:** For the application of the **KUT CURE WB** various types of spraying equipment can be used i.e. Knapsack or motorised sprayers. Immediately after use the spraying equipment should be cleaned out with water. If the spray nozzle becomes blocked with wax particles these can easily be removed using white spirit or similar fluid.

**Fire:** **KUT CURE WB** is water based and is non-flammable.

## STORAGE

**KUT CURE WB** has a shelf life of 12 months when stored at temperature between 4°C and 35°C. Containers should be kept airtight to prevent surface evaporation. Freezing or prolonged exposure to direct heat or direct sunlight must also be avoided.

**Note:** Mix well before use

## HEALTH AND SAFETY

**KUT CURE WB** is non-toxic. It is advisable to wear goggles when spraying. Inhalation of the spray should similarly be avoided. Should excessive skin contact with compound occur the area of skin should be washed with soap and water and a skin conditioning cream applied. If **KUT CURE WB** comes into contact with the eyes they should be flushed with clean water for ten minutes. If any irritation persists, medical attention should be sought. If the compound is swallowed do not induce vomiting but obtain medical assistance immediately.

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