



Emcoril / Emcoril White

Liquid membrane forming compound for curing concrete

Product Properties

- **Emcoril / Emcoril White** can be used everywhere, where an efficient curing is required. It is very suitable for large areas of concretes that are directly exposed to sunlight, heavy winds and other environmental influences.
- Minimizing the shrinkage cracks on account of curing at early stages
- Optimal hydration leading to stronger end-hydration products
- Helps achieve proper compressive and flexural strengths
- Single application thereby saving of labour costs
- Enables better quality control at sites
- Reduces the surface dusting
- Increases the surface hardness of the concrete
- Does not affect the normal setting process of cement
- Ideal for curing at places having water shortage, Eliminates the need for 28 days water spraying, hessian, PE films, etc.
- Easy to apply, Curing can be carried out soon after concreting therefore no extra labour required
- Better solar reflectance lowers the temperature of concrete, prevents thermal stress and cracking

Areas of Application

- Concrete roads bridges and Canal linings.
- Airport runways, motorways and harbours, portpiers etc.
- Dams and other irrigation related structures
- Sport areas and ice rinks
- Precast piles, pipes and other precast components
- Roof decks, slabs, retaining walls etc.
- Prestressed girders, beams etc.
- Over head repair areas and inaccessible areas
- Chimneys, cooling towers and other tall structures

Application Notes

General

The strength and durability of concrete does not only depend upon the correct composition and placing of concrete but also upon the correct curing. The principle of curing is to prevent the evaporation of the capillary water in the concrete so that sufficient water is available for complete hydration that leads to better end hydration products, thereby avoiding the surface dusting and plastic shrinkage. The conventional methods of curing like water spraying, covering with wet burlaps, polyethylene sheets etc., are not only time consuming but also starts after the initial evaporation of water and after the appearance of the first cracks. The ideal curing technique should begin as soon as possible after the casting of concrete.

Emcoril / Emcoril White are membrane forming curing compounds, to be brushed or sprayed on the fresh concrete only once, at the very initial critical hardening period of concretes or mortars. **Emcoril / Emcoril White** curing compounds form a seamless film on the surface of the freshly cast concretes and mortars, which arrests the evaporation of water from the capillaries and prevents quick drying of the concrete avoiding the cracks and enabling the concrete to hydrate efficiently. It is physiologically harmless and does not contain any constituents that would affect the concrete. **Emcoril / Emcoril White** disintegrates after about one month by virtue of its in-built film breaking system. The amount of water evaporation is depicted in the accompanying graph (chart as per Lerch). **Emcoril White**, a white-pigmented curing compound aids in reflection of UV rays as well as enables the quality controller at site to ascertain that the full area is covered on account of its white color. It is very suitable

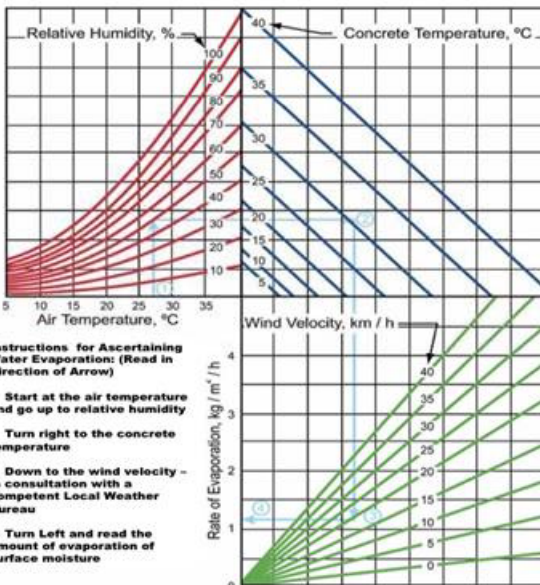
for areas directly exposed to extreme sunlight and wind & conforms with ASTM C 309 specifications .

Instruction for use

Emcoril / Emcoril White curing compounds are water-based wax emulsions and therefore it is necessary to shake the containers thoroughly before use. **Emcoril** should be applied as soon as possible after casting of concrete and immediately after the disappearance of water sheen from the surface. The time period is preferably within about half an hour depending upon the temperatures. **Emcoril / Emcoril White** should not be applied when standing water is present. If concrete has lost some of the surface water, it is recommended to fog down the surface before application of **Emcoril**. For curing of concrete, which is retained on the formworks, the concrete should be wetted thoroughly after opening the shuttering and the **Emcoril / Emcoril White** should be sprayed or brushed. The application can be carried out using normal knapsack sprayers (insecticide tree sprayers) having suitable nozzle. In case of larger areas motorized continuous spraying devices can be used. **Emcoril / Emcoril White** can also be applied by normal brushes or rollers. The nozzle of the spraying device should be held about 0.7 to 1.0 m distance from the surface and it should be ensured that the complete area is covered. The pump pressure must be maintained throughout the operation to obtain a fine spray. The nozzles should be cleaned intermittently either by water or white spirit. Since the film disintegrates only after about a month, it should not be used on surfaces where future plastering or mortar is planned within a month's time. If used under such conditions, the surfaces should be thoroughly cleaned by mechanical means or hot water.

Further Instructions / Precautions

Diagram Showing the Drying Behaviour of Concrete Depending upon Air Temperature, Relative Humidity, Fresh Concrete Temperature and Wind Velocity (According to LERCH)
Figure: Courtesy Portland Cement Association



Abstracts from test Report B-76-322 (Showing typical values)

Loss of weight (Grams / cm²) due to water evaporation from the mortar specimens stored at 38°C and 32% R.H.

Specimen	Untreated Specimens	Treated Specimens	Curing Efficiency
Length of Exposure	Avg. water Loss (gm /cm ²)	Avg. water Loss (gm /cm ²)	%
24 Hours	0.250	0.011	96
72 Hours	0.303	0.049	84
7 Days	0.343	0.089	74
14 Days	0.391	0.136	65
Average			80

Technical Data For Emcoril / Emcoril White

Characteristic	Unit	Value	Comments
Density	Kg/dm ³	Approx. 1.00	
Curing Efficiency	%	80	Refer table below Report B-76-322
Consumption	g/m ²	150-250	
Drying Time	Hrs	Approx 3.00	+20°C

Product Characteristics for Emcoril / Emcoril White

Type of Product	Membrane forming Curing Compound
Form	Liquid
Colour	White, translucent
Shelf Life	12 months from date of Manufacture
Delivery	230 Kg drum and 30 Kg Pail
Storage	In Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost
Disposal	Empty packs completely and dispose off carefully to protect our Environment

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees, which may differ from the data contained in our information sheets, are only binding if given in written form. The accepted engineering rules must be observed at all times. E. & O.E.

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