

MASTERKURE™ 107i

White pigmented, wax based, membrane forming concrete curing compound

Description

MASTERKURE 107i is a solvent free; membrane forming wax emulsion, suitable for curing newly placed or freshly deshuttered concrete, assists in the retention of water during hydration.

MASTERKURE 107i incorporates a white pigment which at recommended coverage rates gives a daylight reflectance value of 60-80%. This permits a high curing efficiency to be maintained even in conditions of intense ambient light.

The resultant film retains sufficient moisture in the concrete to ensure full hydration of the cement; essential for optimum strength development. Membrane cured concrete is typically harder and exhibits a dust free surface with a reduced incidence of drying shrinkage cracks.

Uses

As a more effective and economical alternative to hessian and water and polythene curing regimes. Suitable for use on all concrete surfaces.

MASTERKURE 107i is not recommended for applications where subsequent renders, toppings or coatings are to be applied or on coloured concrete surfaces.

Advantages

- Improves moisture retention in concrete
- Prevents rapid water evaporation
- Single application
- Promotes a harder dust free surface
- Reduces drying shrinkage
- Reduces the incidence of hairline cracks
- High curing efficiency
- Reduced labour costs
- Solar reflective
- Water based - user friendly
- Cured film is white and water repellent

Typical properties

| | |
|------------------------------------|-------------------------------|
| Aspect | : White liquid |
| Relative density | : 1 ± 0.05 @ 25° C |
| Dry film appearance | : white solar reflective |
| Loss of Water (ASTM C156) | : < 0.55 kg /m ² |
| Day light reflectance (ASTM E1347) | : $> 60\%$ |
| Drying time | : Less than 3 Hours |

Standards

- ASTM C309 Type II Class A

- BS 7542: 1992

Specification clause

The liquid membrane forming curing compound shall be MASTERKURE 107i, water based, wax based, white pigmented formulation free of any solvents. The product shall comply with ASTM C 309 Type II, Class A. The product shall exhibit water loss not more than 0.55 Kg/m² in 72 hours when tested as per ASTM C156 & shall exhibit day light reflectance $>60\%$ when tested as per ASTM E1347.

Directions for use

Use MASTERKURE 107i as supplied without dilution. Stir well before use (rolling drums containing the product is an effective method).

Do not use as a bond breaker or apply over bond breaker.

The compound should be spray applied as evenly as possible to the freshly placed concrete.

On horizontal surfaces the curing efficiency of MASTERKURE 107i will be adversely affected if applied on standing bleed water as the required film will not be able to be formed. Timing of application is important so that the curing membrane is applied as soon as the surface sheen disappears but should not be delayed thereafter.

On vertical surfaces the MASTERKURE 107i 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 MASTERKURE 107i film on vertical and formed surfaces, it is essential to dampen down the concrete with clean water prior to application.

In case if spray application is not possible, ensure to apply using short-nap roller. If bubbles appear on the surface, slow down the speed of rolling. Do not overlap. Take adequate care to prevent marring of the concrete surface.

Drying time is approximately 2 hours at 21°C with the relative humidity at 50%. Higher humidity or a lower temperature will increase the drying time. Note that the 2 hours time is for drying only; the full strength of the curing membrane will not develop for 2 – 4 days.

Protect the applied surface from rain until the film has totally dried.

Subsequent surface finishes

It is important that the complete removal of the MASTERKURE 107i should be ensured prior to the application of any surface finish or additional treatment. It is recommended that where the concrete is to receive a coating or the application of tiles, the use of MASTERKURE 181 is considered. (see separate datasheet)

Curing/ After Treatment

Breakdown of the MASTERKURE 107i film usually commences after 30days and takes up to 6 months for total disintegration to occur. The time for disintegration in all cases is dependent on a number of variables, such as thickness of film applied; the degree and severity of exposure to weather and traffic, and porosity of the concrete. BASF offers no guarantees that breakdown will ever be wholly complete.

Removal

Ease of curing compound removal is directly related to the length of time the compound is left on a surface. If MASTERKURE 107i will be removed at some point, remove it as soon as curing period is complete (no longer than 28 days) for best results.

Do not use acid to remove MASTERKURE 107i. Acids will not dissolve the wax coating but will dissolve the surface of the concrete.

Cleaning

Use hot water and detergent to clean rollers and spray equipment before MASTERKURE 107i dries.

Coverage

The recommended rate of application is 5-6 square metres per litre. This corresponds to that at which MASTERKURE 107i has been tested, and at which it attains the claimed degree of curing efficiency. In favourable conditions such as shaded interior surfaces, adequate curing can be achieved with extended coverage rates.

In place of the above recommendations, the rates of cover stipulated in a specification should at all times be observed.

Packaging

MASTERKURE 107i is available in 20Ltrs & 210 litre drums.

Storage and Shelf life

MASTERKURE 107i must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local BASF representative.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

Disclaimer

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