

PRODUCT:

SURFACE-CURE BE (WATERBASED BITUMEN MEMBRANE CURING COMPOUND)

DESCRIPTION:

SURFACE-CURE BE is a liquid membrane-forming curing compound applied to concrete to restrict the loss of water during the early hardening period. It consists of non-volatile solids mixed with water. After application the water evaporates leaving the solid material deposited as a thin film over the concrete surface.

SURFACE-CURE BE is a Class Z curing compound for use on new concrete that facilitates maximum moisture retention through 28 days curing period to maximise concrete strength & durability.

SURFACE-CURE BE, when applied by the correct method and at the recommended application rate, leaves a black dried film as **SURFACE-CURE BE** is based on EMULSIFIED bitumen combined with other additives.

SURFACE PREPARATION:

SURFACE-CURE BE should be applied to the exposed surfaces of concrete after the sheen of moisture, brought to the surface by the final screeding and trowelling operations, has disappeared but while the concrete is still damp. At the same time, the concrete should have hardened sufficiently to ensure that the surface is not damaged during the application of the curing compound. Undue delay will reduce the effectiveness of the treatment. If the compound is applied to a dry surface, it may soak into the concrete and not form a continuous film. Because of delays in finishing slabs, the curing compound is sometimes not applied until the day following the placement of the concrete. By this time the top of the slab may have dried out or plastic cracking may have taken place. Application of any curing compound at this time could result in the hydration of the cement being affected detrimentally; dustiness, cracking, and loss of strength and durability can result. (These problems can sometimes be overcome by thoroughly moistening the concrete before applying the curing compound.)

Prompt commencement of curing is particularly important for the satisfactory development of compressive strength of concrete containing pozzolana. When an unexpected delay in placement or finishing occurs, the surface of the concrete should be kept moist until the curing compound is applied. On the other hand, a premature application of the compound is also undesirable in that the film may not adhere to the concrete or may be broken, particularly if excessive bleeding of the concrete occurs. Water-based compounds are more susceptible to dilution by residual bleed water than compounds which are solvent-based.

Because of surface irregularities, the actual surface area to be sealed can be of the order of 30% more than the theoretical plane area. This is often not allowed for in determinations of the quantities required for the appropriate coverage rate. Because of their relatively low viscosity, there is also a tendency for some curing compounds to run off peaks on a rough surface and form thicker layers in the hollows. For this reason, the use of wax emulsions should be discouraged on

heavily textured surfaces Concrete that has been stripped of formwork should be moistened by light spraying until the surface will not readily absorb more water prior to the application of the curing compound. Failure to pre-wet the concrete may not only have a detrimental influence on the effectiveness of the curing treatment but may also result in a patchy appearance of the concrete.

DIRECTIONS FOR USE :

Windy conditions at the time of spraying can make it difficult to obtain a uniform coverage at the specified rate and additional applications may become necessary. As SURFACE-CURE BE is a suspension of solids, it may have to be stirred frequently to overcome settlement and to avoid blockages of the spray nozzle.

The choice of a suitable consistency for spraying can be influenced by the ambient temperature. At very low temperatures, it may be necessary to store the emulsion in insulated containers and to keep the containers covered during use to prevent application difficulties associated with excessive viscosity. On the other hand, at very high temperatures the viscosity of SURFACE-CURE BE may be reduced sufficiently to create problems of running or sagging when they are sprayed on vertical surfaces.

Emulsions can 'break' or separate at extremes of temperature; the component floats to the surface leaving a clear aqueous layer at the bottom of the container. Care should be taken to prevent the formation of excessive pinholes in the membrane as appreciable evaporation can take place through them. A second application at right angles to the first will improve the likelihood of sealing all pinholes.

Windy conditions, high temperatures associated with rapid evaporative losses, or lack of care on the part of the operator can result in large variations in the rate of application. It is not sufficient to measure the volume of material sprayed over a large area to determine the average coverage rate, because this will not indicate the uniformity of coverage nor the volume blown away by the wind.

This uncertainty can be quantified by placing pre-weighed absorbent pads at different places on the area to be sprayed. After the applicator has covered the area concerned, the pads are immediately folded with their wet sides together, placed in plastic bags to prevent evaporative losses and weighed. Any significant difference in the masses of the wetted pads indicates lack of uniformity of coverage. If brushing is used and concrete is still wet enough to be marked by the brush, it is too early to apply the curing compound because continued brushing will open the surface of the concrete, allowing excessive penetration of the curing compound and breaking the continuity of the film. When dry, the coating should be continuous, flexible and without visible breaks or pinholes, and should remain as an unbroken film for at least 7 days after application. The compound should not react detrimentally with the concrete.

IN USE:

Mix prior to use; do NOT CONTAMINATE with other curing compounds as this contamination may collapse the emulsion. Ensure SURFACE-CURE BE is homogeneous.

Calculate area to be treated, pre-measure the volume of SURFACE-CURE BE. Apply one full coat forming a continuous film at a rate of 5m²/L. wet on wet, as required to obtain the necessary application rate or use the volume. Ensure

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there are no misses.

APPLICATION EQUIPMENT Low pressure spray (preferred) or soft 10-15mm nap roller.

ALLOWABLE THINNING Nil – use as supplied

COVERAGE 5m²/L (0.2litres/m²) using a spray applicator – do not brush.

CLEAN UP Water when wet. Kerosene, fuel or Chemical House Solvent 525 (allows re-emulsification with water) when dry.

DRYING TIME Approximately 1½ -2hours at 25°C. After this time the **SURFACE-CURE BE** will be **shower resistant**, and will resist re-emulsification and consequential removal. This feature will help diminish the potential for wash away by rain within 8 hours of application.

PROPERTIES

COLOUR	BROWN-BLACK FLUID
VISCOSITY	>0.050Pa. s
SPECIFIC GRAVITY	0.95-1.0
Drying Time	2-4hours
FLASH POINT	NOT APPLICABLE
WATER RETENTION EFFICIENCY	>90%
NATA Certificate Serial Number	37294

COMPATIBILITY:

SURFACE-CURE BE is eminently suitable as a pre-coat for finishing with a asphalt black top surface.
Compatibility tests should be undertaken and confirmed by testing for other applications in each and every case.

STORAGE:

Not classed as hazardous by ATDG Code. However store in a cool dry place. Do NOT freeze.

SAFETY

When applying always use suitable cartridge masks, avoid skin and eye contact. Refer to material Safety Data Sheet for detailed information.

ENVIRONMENTAL IMPACT:

SURFACE-CURE BE contains surfactant systems classed as "**Readily Biodegradable**" complying with AS4351.

PACKS:

20L, 200L, 1000L plastic drums/tanks

Ref: SURFACE-CURE_BE_PDS
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