

## PRODUCT:

## SURFACE-CURE W (CLASS A CURING COMPOUND)

## BACKGROUND:

A membrane-forming curing compound is a liquid material applied to concrete to restrict the loss of water during the early hardening period. It consists of non-volatile solids mixed with either water or a solvent. The solvent, or blend of solvents, can be an aliphatic or aromatic hydrocarbon, or other type of organic solvent. After application the volatiles evaporate leaving the solid material deposited as a thin film over the concrete surface.

## DESCRIPTION:

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

**SURFACE-CURE W**, when applied by the correct method and at the recommended application rate, leaves a dried waxy film, as **SURFACE-CURE W** is based on petroleum waxes combined with other additives.

**SURFACE-CURE W is a special wax in that it does not have the same OH&S issues\* of causing pedestrian traffic to slip when walked on. The film is drier and it is easier to work. \* when applied at the recommended rate.**

## SURFACE PREPARATION:

**SURFACE-CURE W** 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.

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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. **SURFACE-CURE W** contains a fugitive dye that has no curing properties but is useful in ensuring that a uniform application is achieved. The density of the pigmentation enables the operator to judge whether sufficient coverage has been achieved. As **SURFACE-CURE W** 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 W** 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. Ensure **SURFACE-CURE W** is homogeneous.

Calculate area to be treated, pre-measure the volume of **SURFACE-CURE W**.

Apply one full coat forming a continuous film at a rate of 5m<sup>2</sup>/L. wet on wet, as

required to obtain the necessary application rate or use the volume. Ensure there are no misses.

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

**ALLOWABLE THINNING** Nil – use as supplied

**COVERAGE** 5m<sup>2</sup>/L ( 0.2litres/m<sup>2</sup> ) using a spray applicator – do not brush.

**CLEAN UP** Water when wet. Kerosene, fuel ,Solvent 525 or Easi\_Orange (allows re-emulsification with water) when dry.

**DRYING TIME** Approximately 11/2-2hours at 25°C. After this time the **SURFACE-CURE W** 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	LIGHT PINK MILKY FLUID
VISCOSITY	>0.050Pa. s
SPECIFIC GRAVITY	0.95-1.0
FLASH POINT	NOT APPLICABLE

**COMPATIBILITY:**

**SURFACE-CURE W** will darken slightly with age and UV exposure.  
**SURFACE-CURE W** is not compatible with many hydrocarbon solvent-based primers and is NOT suitable for use on concrete roads which will be subject to line marking.  
Compatibility tests should be undertaken and confirmed by testing 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 W** contains surfactant systems classed as “**Readily Biodegradable**” complying with AS4351.

**PACKS:**

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

Ref: SURFACE-CURE\_W\_PDS  
Date: May 2009