

Wet or un-cured Concrete with Resin Floors

Outline

Laying resin flooring on new concrete has always been an issue. Time pressures are constantly reducing time on site. Newly laid concrete shrinks. This occurs largely in the following 14 days and to a much lesser extent for the next 14 days. Resin floor toppings are almost fully cured in 24 hours. Concrete shrinking beneath the resin floor topping can cause the latter to delaminate. (see the concrete-topping interface on the photo to the right). Installing more concrete and resin topping control joints (flexible K130) will help if a resin floor topping is planned to be laid early. If it occurs, any future cracking should follow these joints where they may be more easily repaired.



Sureshield topping on concrete slab

The water in concrete is a lesser problem and water may reduce to low levels within the 14 – 30 day period as long as it is protected from further weather or site based wettings. It is also very important, if toppings are to be laid early, that the site and concrete surface is kept clean and even swept. The open, clean surface will dry much more rapidly.

Concrete curing compounds are used to hold water and to prevent excessive shrinkage and to obtain maximum strength. Their use past 10 days is largely redundant. These curing compounds will drastically retard the dry and make resin floor toppings difficult to lay. The answer is their removal after 10 days. Use shot-blasting to remove them. This also cleans and opens up the surface and makes drying far more rapid. The loss of curing compound also will enhance adhesion. Keeping the blasted surface and site clean and dry will enable early application of toppings.

Site warming and heating is not necessary and is impractical. However natural or forced air cross-ventilation over a continuous period will very rapidly drop moisture levels. Closed cold rooms will dry exceedingly slowly.

It is very important, if the installation programme is tight, to have open and clear site meetings with all parties to elaborate to all concerned, the requirements outlined above. Laying on concrete less than a month old will always be risky due to the variable nature of concrete, the laying conditions and the drying conditions. Endeavor always to plan the concrete pours to ensure a months curing and drying time.

Possible Installation options:

Days	Resin Floor Options	Preparation
+2 – 7 days	Nuthane Polyurethane	<p>Floor topping installation risky. The concrete will be very wet and will be shrinking strongly during this period.</p> <p>The concrete surface will be weak and friable.</p> <ul style="list-style-type: none"> • Heavy shotblast, forced air & heated for full two days before installation • Keep site surface clean • Employ cross ventilation prior • Install more flexible control joints.

7 - 14	Nuthane Supascreed	<ul style="list-style-type: none"> • Heavy shotblast, forced air & heated for full two days before installation • Keep site surface clean • Employ cross ventilation prior • Install more flexible control joints.
14 - 28	Supascreed Epoxy Nuthane Polyurethane	<ul style="list-style-type: none"> • Normal shotblast • Keep site surface clean • Employ cross ventilation prior • Install more flexible control joints.
28+	Sureshield Terrazzite and all resin floor systems	Normal grind or shotblast

On **existing concrete toppings with poor slopes**, resin floors often need to be laid to falls. Nuplex offer STZ PREFILL in 3 options. Please refer to STZ PREFILL tech data.
An overview outline is shown below.

	Type and curing Time #1	Type and curing Time #2
Sureshield	PE 24hrs	Cement 28days
Industrial Terrazzite	PE 24hrs	Cement 28days
Decorative Terrazzite	PE 24hrs	Cement 28days
Architectural Terrazzite	PE 24hrs	Cement 28days
Supascreed	Epoxy 24hrs	Cement 48hrs
Traxite	PE 24hrs	Cement 28days
Surechem VE	PE 24hrs	Cement 28days
Quartzzite	PE 24hrs	Cement 28days
Surecote 500/500AR	Epoxy 24hrs	Cement 48hrs
Nuthane	Cement 48hrs	Epoxy 24 hrs
RapidFloor MMA	Epoxy 24hrs	Cement 7 days

This advice is given in good faith. Take great care with wet, uncured concrete floors. Nuplex resin floor toppings are only applied by licensed contractors and members of the Nuplex Contractors Federation.

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For all data see www.nuplexconstruction.co.nz



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