

Exterior Installations of Nuplex Resin Flooring Systems



Nuplex resin floor toppings provide excellent concrete and environmental protection. Some of these installations are in exterior environments with direct sunlight exposure. Products such as Sureshield and Surechem VE, Situclad VE, Situclad E and Fibreclene will perform well in these environments.

Installation

Clear resin systems may be difficult to install in situations directly impacted by sunlight. These products include Sureshield, Surechem VE and Situclad VE.

Summer Installations

In clear and hot conditions the cure time is shortened, the pot life becomes shorter and accelerated curing may cause crazing.

It is apparent that this is more than heat effects as reducing catalyst and promoters does little to lengthen working time.

Although hot conditions will increase cure speed, it is UV light that is acting as a very efficient catalyst in conjunction with the standard promoter and catalyst systems. It becomes, in effect, a UV cured system. UV curing is very efficient.

This effect is confirmed by Nuplex testing.

Solution:

- 1.0 Protect the area with tenting. Prevent UV direct or reflected light hitting the curing surface. This has the advantage of protecting against rain too.
- 2.0 For clear resins: Pigment the system with STZ Tinter Sureshield Gold at 4% or use Iron Oxide yellow pigment (yellow 3920).
Use the latter at a rate of 0.05% on the weight of aggregates. (eg 25 grams per 50 kg of aggregates).
Disperse well.
Pigmentation prevents, by absorbing UV light entering a clear resin, rapid curing by UV acceleration. This is very similar to sunblock effects. It has a very significant effect in reducing accelerated curing caused by UV. Pigment both resin and topcoat. Topcoat is best pigmented with tint paste STZ Sureshield Gold
- 3.0 A combination of tenting and pigmentation should work well to lengthen work times.
- 4.0 Store materials in cooler environments. In summer, materials stored in shipping containers (and in vehicles), will get very hot. Materials that are already hot will cure very quickly.
- 5.0 Ensure surface preparation is intense and a very rough profile is obtained (CSP 8). In hotter conditions curing is rapid and expansion occurs followed by shrinkage. Without strong abrasion and anchorage grooves delamination may occur.

Winter Installations

Wet and cold conditions are very challenging.

Consider tenting to prevent re-wetting of concrete.

Condition (store) the materials in mild conditions. Materials that are already cold will cure very slowly. Warming a shipping container will give better curing of the materials. This does not need to be hot; just warmed to normal ambient. Once catalysed at a normal temperature range, resin materials will continue to cure; even if placed on cold concrete floors. So storage is important.

Manage promoter and catalyst levels to set a good curing profile.

All Conditions – wind

Strong air movement across the surface of wet / yet un-cured resin floors is likely to cause crazing.

The air movement will induce Styrene loss and this causes slight shrinkage.

That slight shrinkage causes crazing.

Solution:

During the critical wet phase ensure hoarding is placed to prevent strong cross air movement.

Other

- When using Situcad VE outside always use Situcad VE glass flake as the topcoat for UV protection as well as chemical protection.
- Situcad E is a very good UV durable, exterior lining and waterproofing system.

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For all data and MSDS sheets, please refer to our website. www.nuplexconstruction.co.nz

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