

Exterior Installations of allnex resin flooring systems

allnex resin systems provide excellent concrete protection when installed correctly; some of these installations occur in exterior environments where the climate can dramatically affect the performance of the finished systems.

allnex systems will perform well if the environmental conditions are taken into account and managed during and following the installation.

Installations in clear and hot conditions can result in; reduced material pot life, cure times being shortened, and cure times accelerating.

These clear, hot conditions may cause surface crazing or create cure characteristics that become detrimental to the long term performance of the resin system.

Clear resin systems can be affected by more than just excessive heat, UV light can act as a very efficient catalyst and in conjunction with the regular promoter and catalysts being used they can become in effect “a UV cured system”.

Reducing the catalysts and/or promoters does little to lengthen working time or improve cure profiles in these conditions, material management is the key to a successful installation.

allnex has carried out a significant amount of external exposure testing on several different clear resin systems and are confident when they say the effects of UV curing is very efficient and can dramatically effect the cure profile and long term durability of clear resins when applied externally.

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 also.
- 2.0 For clear resins, e.g. Sureshield, Surechem VE where possible pigment the system. STZ tinter Sureshield Gold at 4% resin weight or Iron Oxide yellow pigment (yellow 3920) at a rate of 0.05% on the weight of aggregates. (e.g. 25 grams per 50kg of aggregates). Ensuring the tint or pigment is well dispersed will prevent the UV light entering and being absorbed by the clear resin thereby reducing the UV effects resulting in excellent through cure and good long term performance. Pigmented resins block the effects of UV rays similar to the way sunblock can protect the skin.

For optimal performance pigment both the base resins and top-coats

- 3.0 A combination of tenting and pigmentation will work well to lengthen work times and ensure good through cure.
- 4.0 Store materials in cooler environments. In summer materials stored in shipping containers and in vehicles or in direct sunlight can become very hot, this extra heat will accelerate the natural exotherm leading to shorter material pot life and increasing the speed of cure resulting in similar to problems detailed

above.

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 a strong mechanically formed surface bond and interface anchorage delamination may occur.

Winter Installations

Wet and cold conditions are also very challenging, consider tenting to prevent re-wetting of concrete and to form protection from adverse conditions. On smaller projects the tent could also be heated to aid installation.

Condition (store) the materials in milder warmer conditions, materials that are already cold will cure very slowly exposing the finish to damage whilst still in the wet stage.

Conditioning materials can be vital for the successful installation of resin systems in challenging conditions.

Once catalysed and at a normal temperature range all resin materials will continue to cure; even if placed on cold concrete floors so storage is important.

For Sureshield and Surechem catalyst systems management of the promoter and catalyst levels can also be adjusted slightly to ensuring a good curing profile. (trailing small mix designs prior to the full installation will show what and what cannot be achieved.)

All Conditions

Wind, strong air movement across the surface of wet un-cured resin floors is likely to cause rapid curing and crazing.

The air movement will induce solvent and/or styrene loss and this causes slight shrinkage that slight shrinkage can cause the crazing.

Solution: During the critical wet phase ensure hoarding or draught excluders are placed to prevent strong cross air movement.

For further advice or information please do not hesitate to contact the allnex technical team.

Free Ph: 0508-88 22 88
E-mail: cs.constructionnz@allnex.com
Website: www.allnexconstruction.co.nz

Date: Aug 2019
Replaces August 2015

Allnex Construction Products, a Division of Allnex New Zealand Ltd
Auckland - 14 Industry Road Penrose phone: 095836544. Hamilton - 18 Somerset Street Frankton phone: 07-847-8658
Wellington - 19A Jamaica Drive Grenada North phone: 04-240-0305. Christchurch - 112 Carlyle Street Sydenham phone: 03-366-6802
Customer Service: 0508-882-288 cs.constructionnz@allnex.com
www.allnexconstruction.com



DISCLAIMER: This information appearing in this Document (**Details**) concerning the product which is the subject of the Document (**Product**) is either based on present technical knowledge and tests done by allnex or tests done by, and data supplied from third parties including you, the customer. Since the actual use by you and by others of the Product is beyond the control of allnex, no warranty or representation, express or implied is made by allnex regarding the suitability for such use, nor does allnex accept any liability arising out of the use by you of other products or materials, whether third party or not, that may be referred to in this Document. allnex recommends that you carry out your own tests as to the suitability of the Product for your purpose, regarding which you accept full responsibility. In addition, if any of the Details appearing in the Document are based upon tests done by, and/or data supplied by any third party, allnex provides no warranties or representations in connection with those Details and you, the customer waives any right you may have against allnex in connection with the accuracy, completeness or otherwise of the Details. The information in this Document is not to be construed as absolutely complete or accurate since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations affecting use of the Product. allnex does not provide any warranty or representation to you that the Product does not infringe the intellectual property rights of any third party. All orders accepted shall be subject to the standard conditions of sale of allnex which are on the back of our invoice. In accepting the Product you, the customer acknowledge and agree: **a.)** The Product is or may be of a hazardous nature and that you, the customer, are responsible for the disposal of the container housing the Product in accordance with the requirements and regulations of the relevant supervising government. **b.)** The Product has a limited shelf life and must be stored strictly in accordance with the guidelines and specifications related to it. **c.)** Where the Details relate to Product tested by allnex, those Details are indicative only, regarding which there may be batch to batch variation. **d.)** allnex gives no warranty or representation as to the applicability for the particular use by you, the customer, of the Product and you the customer shall be responsible for ensuring that the Product is fit for your intended use. **e.)** allnex's liability for breach of any term, condition, guarantee or warranty (express or implied and concerning the information in this Document or the Product more generally) including any liability for direct or indirect consequential loss (including indirect loss of profits), is limited to the maximum extent permitted by law and, at allnex's election, to either replacing or repairing the goods or paying the cost of replacing or repairing the goods, or in the case of services, supplying the services again.

©2018 allnex Group. All Rights Reserved.