# **Resin Bound Moisture Damage**

Moisture damage exists when dew, frost, rain or snow comes into contact with the uncured resin binder. A reaction occurs between moisture and the binder, which is visible by foaming in-between the aggregates. If you have moisture damage in your system could be due to a number of reasons. This is something that can be prevented for projects shown below as well as what to do in the event of a failure.



## Prevention

#### **Humidity:**

Humidity is the concentration of moisture present in the air. Water vapor, the gaseous state of water, is generally invisible to the human eye. When the Humidity is over 80% and the temperature hits the Dew point this is when a Resin bound installation can be affected by moisture damage. Not all moisture damage is visible immediately in the form of surface clouding and in fact in some cases it is only a few years down the line you start to see the effects of the moisture damage, for example surface shaling or delamination. Moisture damage exists when dew, frost, rain or snow comes into contact with the uncured resin binder. A reaction occurs between moisture and the binder, which is visible by foaming in-between the aggregates. Tiny amounts of moisture in the aggregates can minimise the performance of the finished application and commonly results in stone loss, surface whitening and blooming.

#### **Conditions:**

Prime conditions to lay Resin Bound is when the temperature is above 5 degrees; humidity is between 34% and 79% and the dew point will not be reached within 24 hours of the installation. No rain, frost, snow or dew expected for a couple of days before and after.

#### Tools to help:

We would highly recommend purchasing a hydrometer and thermometer.

Hydrometer - Based on the reading from the hydrometer you can use a simple calculator to work out the Dew point which can be found online. When using a dew point calculator, bear in mind that it is the ground temperature that will cause dew to form, not the ambient temperature. For example, water-laden air (90% humidity) at 5 degrees C, only needs a ground temperature of 3.49 degrees C before dew forms. Search for -Relative Humidity Calculator such as omnicalculator.com

Alternatively, if you don't have a hydrometer below is a good weather app which also shows the

humidity and dew point. You can also look at weather in the past and near future. timeanddate. com

#### Wet bags:

It is very important to also check your aggregate bags are not wet. We do our very best to not send out any wet bags to you but if you spot any on your delivery then please do make your account manager aware as soon as possible.

#### **Storing Deliveries:**

Moisture can get into your delivery if it is left on site for a number of days unprotected or left out in the rain. Always make sure deliveries are left for as minimal amount of tie as possible in a cool dry area securely wrapped. If left outside cover with a tarpaulin.

### **Solutions or Remedials**

This can be resolved by sealing the full surface – this will add strength and uniformity to the colour of the system. This is not guaranteed to work but contractors have had success with this in the past. When using a sealer, we always advise doing a test patch first. Please refer to our sealing technical document for more information about this.

The only other alternative would be to rip out and install a new resin bound surface.

If in doubt of any of the above then please contact the technical team:

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