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Company Registration Number: 10263216 VAT Registration Number: 245 5324 14

28 June 2018

**Mr Andy Spencer**  
**Project Manager**  
**Pochin Construction Ltd**

Re: Calcium Carbide Moisture Test on Retanol Xtreme Screed

Dear Mr Spencer

Please see below the results of the Calcium Carbide Moisture (CM) Test commissioned by Pochin Construction Ltd on the Retanol Xtreme screed installed by William Lea Ltd at Reaseheath College in Nantwich.

- **Location:** Block F6, Reaseheath College, Nantwich, Cheshire
- **Date of the screed installation:** 18 June 2018
- **Date of the CM Test:** 28 June 2018
- **Equipment used:** Radtke Messtechnik Carbide Moisture Test Kit



### Objective/Methodology of the Test

For any kind of flooring, the final floor finish should not be installed until the screed upon which it is to be laid has dried optimally.

A CM Test offers the most accurate way of assessing the moisture content in floor screeds as it measures the moisture throughout the screed, not just at the very top surface. Please note that readings taken from other testing equipment such as Tramex Meters should be used for guidance purposes only as they are less precise and can be misleading.

A CM Test requires a small representative sample (50g) to be taken from the full depth of the screed and crushed into powder form.



This screed sample is then mixed with a calcium carbide reagent, and subjected to orbital rotation in a vacuum flask.

Upon reacting, the mixture releases acetylene gas, the amount of which indicates the level of moisture in the sample. The percentage of concrete moisture within the sample (% CM) is then recorded at approximately 2, 5, 7 and 10 minutes from the commencement of the test.

**Prior to the installation of the final floor finish, the final CM reading should be no more than 3.2% when testing a Retanol Xtreme screed. This is indicated by the green coloured dial on the moisture content gauge.**

### Findings of the CM Test

The CM Test was carried out by Michael Lea of PCT Chemie UK Ltd. The screed analysed was 60mm in depth and had been laid on insulation 90mm deep.

The following CM readings were taken during the course of the test:

**Reading at 2 minutes - 1.6% CM**



**Reading at 5 minutes – 1.9% CM**



**Reading at 7 minutes – 2.0% CM**



**Reading at 10 minutes - 2.15% CM**



### **Conclusion**

At the end of the CM Test, the gauge reading was 2.15% CM.

Therefore we would now consider the screed that has been tested to be sufficiently dry and ready to receive the chosen final floor finish.

### **Important Considerations**

#### **Potential water spillage and relative humidity**

If there are any areas in the building which have yet to be plastered, please be aware that this could lead to the screed being exposed to further moisture, both through water spillages when mixing the plaster and through an increased relative humidity (RH) in the building. We are highlighting this for your consideration as any water spillages or significant increases in RH can lead to moisture related problems when applying the final floor finish.

If you have any questions, or require any further elaboration with regard to the test results, please do not hesitate to contact me.

Thank you for your time and co-operation during my site visit today.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Michael Lea'.

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