

PCT Chemie UK Ltd, Suite 8i, Enterprise Centre, Moorgate Point, Moorgate Road, Liverpool, L33 7XW
Company Registration Number: 10263216 VAT Registration Number: 245 5324 14

17 January 2019

Mr Paul Williams
Project Manager
MTX Contracts Ltd

Re: Calcium Carbide Moisture Test on Retanol Xtreme Screed

Dear Mr Williams

Please see below the results of the Calcium Carbide Moisture (CM) Test commissioned by MTX Contracts Ltd on the Retanol Xtreme screed installed by William Lea Ltd at Guy's Hospital in London, SE1.

- **Location:** First Floor Corridor of the Orthopaedic Department
- **Date of the screed installation:** During week commencing 10 December 2018
- **Date of the CM Test:** 16 January 2019
- **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 whole 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. Readings from such equipment can result in DPM work being carried out unnecessarily. This is because a Retanol Xtreme floating screed will never require a DPM provided the screed

has been protected from moisture post installation and the minimum drying time has been observed.

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

The screed analysed was 65mm in depth and had been laid on TF70 insulation, 60mm thick.



The 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 after 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 (at 10 minutes) 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 following CM readings were taken during the course of the test:

Reading at 2 minutes – 1.53% CM

Reading at 5 minutes – 1.92% CM



Reading at 7 minutes – 2.16% CM



Reading at 10 minutes – 2.22% CM



Conclusion

At the end of the CM Test, the gauge reading was 2.22% CM.

As the screed tested was the most recent to be installed, we would now consider the screed 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.

I would like to thank you, and Ash Brooks for his time and co-operation during my site visit yesterday.

Yours sincerely

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

Michael Lea
Managing Director
PCT Chemie UK Ltd

Telephone: 0151 345 7390 Mobile: 07432 698 071

Email: info@pct-chemie.co.uk Website: www.pct-chemie.co.uk