Constructing Innovations Ltd

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29 January 2018

To: Rob Walker, Site Manager, McLaren Group

Re: Calcium Carbide Moisture Test (CM Test) on Retanol Xtreme Fine Concrete

Location: Room below Auditorium 8, Cineworld, New Mersey Retail Park, Speke, Liverpool

Date the floor was laid: 12 January 2018

Date of the CM Test: 26 January 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 put down until the floor upon which it is to be laid has dried optimally.

A CM Test offers the most accurate way of assessing the moisture content in floors. Note that readings taken from other testing equipment such as Tramex Meters should be used for guidance purposes only as they are less precise.

A CM Test requires a small representative sample (50g) of the installed floor to be removed from a depth of approximately 50% of the actual depth. This sample is crushed into powder form, mixed with a calcium carbide reagent, and then 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, and 10 minutes from the commencement of the test.

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

Findings of the CM Test

The Retanol Xtreme Fine Concrete analysed was approximately 100mm in depth, laid on void former/insulation 1,000mm deep.

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

- **Reading at 2 minutes - 1.4% CM**

- **Reading at 5 minutes – 1.8% CM**

- **Reading at 10 minutes - 2.2% CM**

Conclusion

At the end of the CM Test (the duration of which was 10 minutes), the gauge reading was 2.2% CM.

Therefore we would now consider the Retanol Xtreme Fine Concrete that has been tested to be sufficiently dry and ready to receive the chosen 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 floor 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.

Yours faithfully

Michael Lea
Managing Director
Constructing Innovations Ltd