

Experiments on water-proofing a lightweight Ytong block

In a discussion with Dansk Fugtstop it was mentioned that a possible application of Dryzone in Denmark could be as a water proofing for already installed Ytong lightweight blocks.

Rising water can occur in these blocks through various sources such as burst pipes. Could this rising damp be controlled by Dryzone treatment?

Block

A lightweight concrete block was obtained from the UK distributor of Ytong. The details of the material can be found on the site;

http://www.xella.dk/downloads/den/documentation/ytongsiporex_plade_technisches_atenblatt.pdf

The contact email of the UK agent is Bob.poll@xella.com

Test

As shown in the picture below, the block was cut into pieces which were treated in different ways;

- (i) a 12 mm diameter hole was drilled into the block , or,
- (ii) a 20 mm deep slot was cut in the block

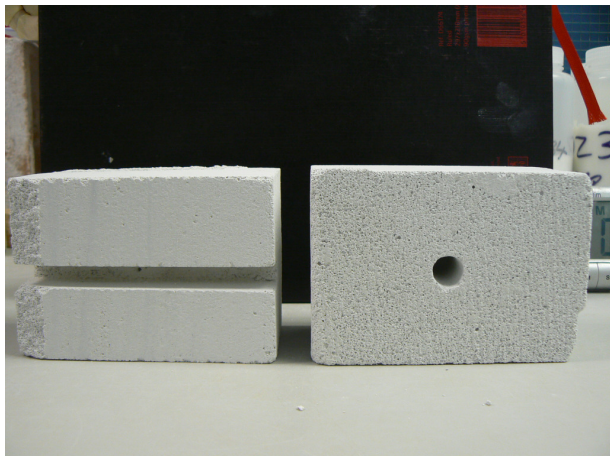


Photo 1: Blocks with a slot or drilled hole



Photo 2: Tape is placed over the slot and the hole capped

The blocks were then left for 4 weeks.

After this period the tape and capping were removed and the blocks then cut in half. The cut surface was then placed in dye solution to see which areas had become hydrophobic by the Dryzone treatment. This is visible in the pictures on the following page as a less coloured area



Photo 3 : Cut block after treatment

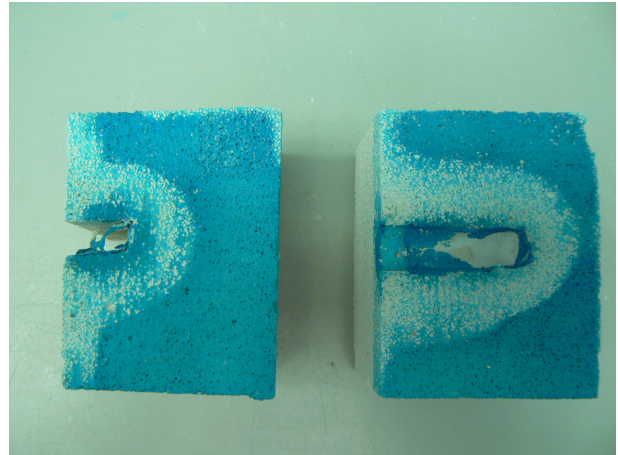


Photo 4 : Dye test showing hydrophobic area

Conclusion

Dryzone works in Ytong lightweight blocks to make the material water resistant.

The higher alkalinity of the block means that the spread is a little lower than expected but it should still be significant to reduce rising damp given that the spread zone increases with age.

The best method of introducing Dryzone is by drilling a hole. It is recommended that 12 mm diameter holes are used at 100 mm spacing between centres

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