DEVELOPED IN HOUSE METHOD
SOP 13 BASED ON BS EN 1170-8: 2008
CYCLIC WEATHERING TEST FOR GLASS FIBRE REINFORCED CONCRETE

Publication Date: June 2020

Document Reference: QMSD-SOP 13

Version: 01

Status: Issue

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This Special Operating Procedure is to be used to comply with the requirements of the BBF Testing modification to EN 1170-8 test requirements.

MODIFIED AGEING CYCLE

The procedures laid out in the standard are to be followed however the 50 ageing cycles for the "C" samples is modified as follows.

- All tests are to be started on a Monday
- Immerse in water bath set at (20+/-2) ºC for 24 hours
- Remove from water bath and immediately place in drying oven set at (70+/- 5) ºC for 24 hours (+/- 30mins)
- Remove from drying oven and place in Climate Chamber set at (20 =/- 2) ºC for 1 hour (+/- 10mins)
- Remove from Climate Chamber and immerse in water bath set at (20+/-2) ºC for 24 hours
- Remove from water bath and immediately place in drying oven set at (70+/- 5) ºC for 24 hours (+/- 30mins
- Remove from drying oven and place in Climate Chamber set at (20 =/- 2) ºC over weekend
- Repeat the above for a further 24 weeks (50 ageing cycles total)

PROCEEDURE

1. Test pieces are to be transported to the laboratory by the producer when aged for 6 days at the production site.
2. On arrival at the laboratory the samples will be stored at room temperature until the following Monday.
3. The transportation time and the laboratory storage will not be taken into account when calculating the age.
4. On the Monday after receipt of test pieces the R samples are to be placed in the climate chamber for 21 days at 20ºC/60%RH.
5. After 21 days remove the R samples and place into the water bath for 24 hours at 20ºC before testing in accordance with EN 1170-5 (See SOP 22)
6. Complete flexural bending test to 1170-5 at 28 days to "R" samples (See SOP 22)
7. Record results on QMSD132
8. On the Monday after receipt the C samples are to be placed in the climate chamber for 21 days at 20ºC /60%RH.
9. After 21 days remove the C samples and commence the cycle as described above.
10. After the 50 ageing cycles at 127 days place samples into the water bath for 24 hours at 20ºC before testing in accordance with EN 1170-5 (see SOP 22)
11. Complete flexural bending test to 1170-5 at 28 days to "C" samples (See SOP 22)
12. Record results on QMSD132
13. Complete QMSD118 Test Report noting the following wording which must be inserted into Section 5:

This test has been carried out with the following modifications from the published standard: The environmental conditions required to carry out the test are provided by separate climate chambers/drying

ovens and water baths and not a combined closed climate chamber. This has necessitated an extension in the period over which the 50 cycles are carried out. As air flow or air renewal used to dry or cool specimens cannot be accurately measured as described in the standard these are excluded from the procedure.

In determining the age of the test piece, the transportation time taken from the production site to the laboratory has not been taken into account.

This validation of the modification to the prescribed test method as detailed in BS EN 1170-08 is based on a systematic assessment of the factors influencing the result as detailed in ISO/IEC 17025:2017 Section 7.2.2.1 Note 2 b)