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**BS EN ISO 1182: 2010 on
Enviroboards Fireboard**

Prepared for:

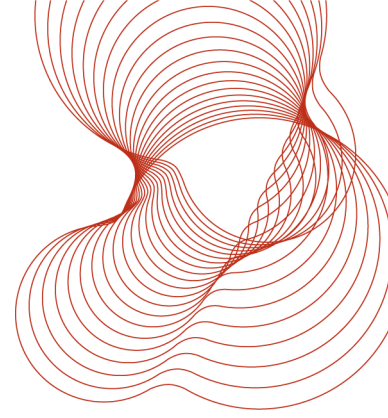
Enviroboards
New Lodge, Conholt,
Hampshire Gate, Andover,
Hampshire, SP11 9HF

14th September 2011

Test report number 273258



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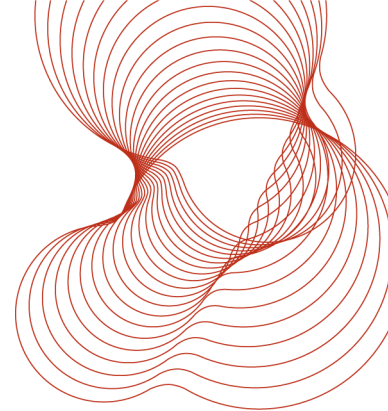
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1 Objectives

To assess the performance of the sample described in Section 2 of this report when subjected to the tests specified in BS EN ISO 1182: 2002¹.

2 Sample

2.1 Traceability

The test sample was supplied by the test sponsor. BRE Testing was not involved in the sampling process and therefore cannot comment upon the relationship between the samples supplied for test and the product supplied to market.

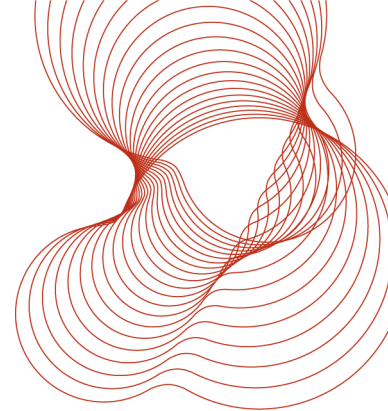
2.2 Sample details

Name and address of test Sponsor	Enviroboards, New Lodge, Conholt, Hampshire Gate, Andover, Hampshire, SP11 9HF
Name and address of manufacturer of product	As above
Place of manufacture	China
Description of specimens (as received)	32 white discs nominally 43 mm in diameter and 9 mm thick.
Description of specimens (Test sponsor's declaration)	Enviroboards Fireboard
Product/component tested	As above
Sponsor's specimen ID	Fireboard
Type of product / component	Fire resistant board
Nominal declared density (kg/m ³)	750 kg/m ³
Mean measured density (kg/m ³)	744.59 kg/m ³ (range 734.77 – 758.35 kg/m ³)
Nominal declared thickness	12 mm
Measured thickness	12.17 mm (range 12.06 to 12.30 mm)
Colour	White
Sample receipt date(s)	18 th August 2011
BRE Global sample number	E4064
Sample test date(s)	1 st September 2011

Note 1. Information not given by Client

2.3 Specimen preparation

The sample was prepared in accordance with the test standard.



3 Conditioning

The sample was conditioned in accordance with the test standard.

4 Test results

4.1 Tabulated data

Deviations: There were no deviations from the test standard.

Table 1: Furnace temperature rise

Run No.	T _m (°C)	T _f (°C)	ΔT (°C)
1	807.0	805.5	1.5
2	779.1	776.5	2.7
3	808.5	806.2	2.4
4	782.9	780.0	2.9
5	775.3	771.6	3.7
Mean value			2.6

T_m = maximum furnace temperature

T_f = final furnace temperature

ΔT = temperature rise (T_m - T_f)

Table 2: Mass loss

Run No.	Initial mass (g)	Final mass (g)	Δm (%)
1	50.86	28.78	43.41
2	51.09	28.80	43.63
3	50.67	28.66	43.44
4	50.82	29.14	42.66
5	50.48	28.53	43.48
Mean value			43.32

Δm = mass loss expressed as a percentage of the initial mass of the specimen

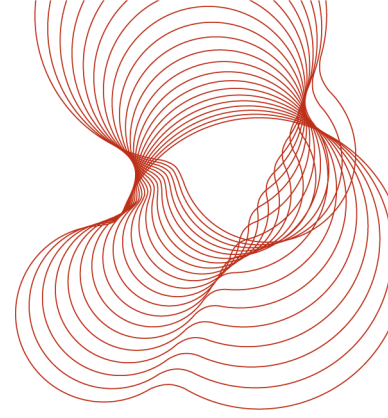


Table 3: Duration of sustained flaming

Run No.	Duration of sustained flaming t_f (s)
1	0
2	0
3	0
4	0
5	0
Mean value	0

4.2 Observations

No sustained flaming was observed in any of the test runs.

5 Conclusions

The mean temperature difference (ΔT) was 2.6 °C

The mean mass loss (Δm) was 43.32 %

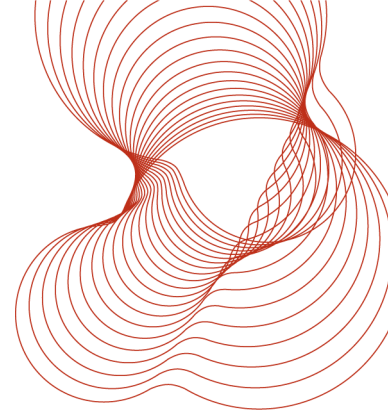
No sustained flaming (t_f) was observed.

6 Validity

These test results relate to the behaviour of the sample in the form in which it was tested; the results do not necessarily relate to products produced as a result of further processing or refinement of the sample under test.

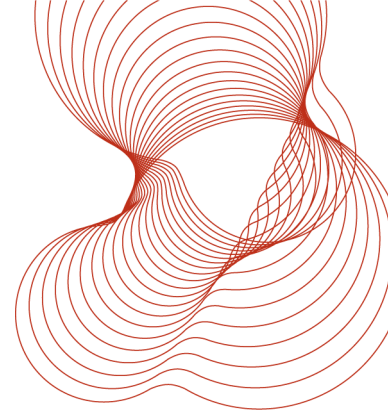
The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons, it is recommended that the relevance of test and classification reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test or classification to ensure that they are consistent with current practices, and if required may endorse the report.



7 Reference

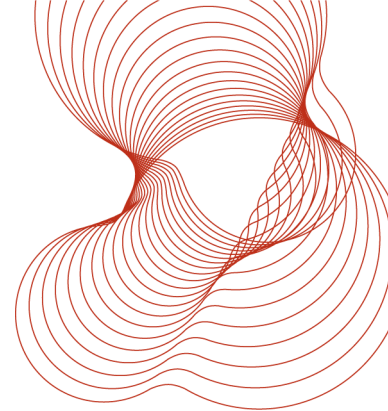
1. BS EN ISO 1182:2010. Reaction to fire tests for products – Non–combustibility test (ISO 1182:2010). BSI, 389 Chiswick High Road, London, W4 4AL. 2010.



Appendix A

Figure A.1 Photograph of test specimen prior to being wired for testing





Annex B

B.1 Calibration Results of the Furnace

Calibration of furnace used in Non - combustibility test EN ISO 1182 (IN 2579) In association with TC IN 2727 and Logger IN 2724

This calibration was carried out in accordance with the requirements of Reaction to fire tests for building products. Non-combustibility test EN ISO 1182. Dated: 11/3/08

Vertical axis	1 at + 30mm	2 at 0mm	3 at - 30mm
A	826.6 °C	830.5 °C	825.1 °C
B	829.2 °C	827.1 °C	826.6 °C
C	833.7 °C	828.3 °C	829.3 °C

Average furnace wall temperature was:

$$T_{\text{avg}} = 829.6 \text{ }^{\circ}\text{C}$$

Mean temperatures measured on the three horizontal axis of furnace:

$$T_{\text{avg axis 1}} = 829.8 \text{ }^{\circ}\text{C}$$

$$T_{\text{avg axis 2}} = 828.6 \text{ }^{\circ}\text{C}$$

$$T_{\text{avg axis 3}} = 830.3 \text{ }^{\circ}\text{C}$$

Deviations of the temperatures measured on the three axis

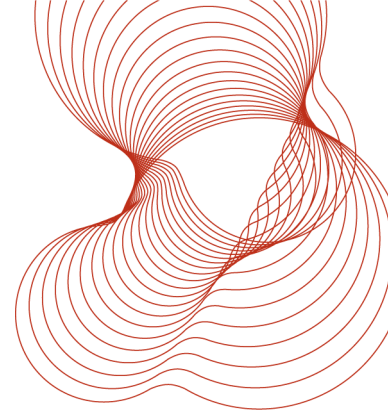
$$T_{\text{dev axis n}} = (T_{\text{avg}} - T_{\text{avg axis n}}) / T_{\text{avg}} \times 100$$

$$T_{\text{dev axis 1}} = 0.03 \%$$

$$T_{\text{dev axis 2}} = 0.12 \%$$

$$T_{\text{dev axis 3}} = 0.09 \%$$

Average deviation of the average temperature measured on the three levels



$$T_{\text{dev axis}} = (T_{\text{dev axis1}} + T_{\text{dev axis2}} + T_{\text{dev axis3}})/3$$

$$T_{\text{dev axis}} = 0.08 \text{ }^{\circ}\text{C}$$

Average temperatures measured on the three levels

$$T_{\text{avg level n}} = (T_{1a} + T_{2a} + T_{3a})/3$$

$$T_{\text{avg level a}} = 827.4 \text{ }^{\circ}\text{C}$$

$$T_{\text{avg level b}} = 831.0 \text{ }^{\circ}\text{C}$$

$$T_{\text{avg level c}} = 830.4 \text{ }^{\circ}\text{C}$$

Deviations of mean wall temperatures on each of the three levels

$$T_{\text{dev level n}} = (T_{\text{avg}} - T_{\text{avg level n}}) / T_{\text{avg}} \times 100$$

$$T_{\text{dev level a}} = 0.27 \%$$

$$T_{\text{dev level b}} = 0.16 \%$$

$$T_{\text{dev level c}} = 0.10 \%$$

Average deviation of the average temperature recorded on each of the three levels:

$$T_{\text{avg level n}} = (T_{\text{avg level a}} + T_{\text{avg level b}} + T_{\text{avg level c}})/3$$

$$T_{\text{avg level n}} = 0.18 \%$$

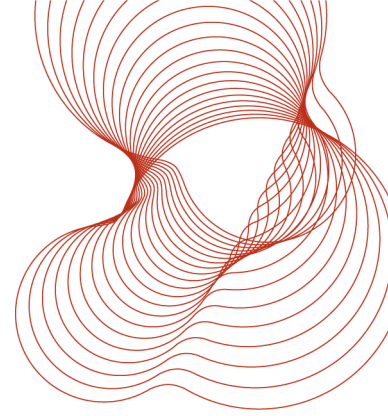
The standard requires that the average furnace wall temperature to be:

$$T_{\text{avg}} = 835 \pm 10 \text{ }^{\circ}\text{C}$$

Furnace gave: $T_{\text{avg}} = 829.6 \text{ }^{\circ}\text{C}$

The Standard also requires that:

$T_{\text{dev axis}}$ shall be less than 0.5 %



Furnace gave: $T_{\text{dev axis}} = 0.08 \%$

The standard also requires that $T_{\text{avg level}}$ less than 1.5 %

Furnace gave: $T_{\text{avg level}} = 0.18 \%$

The vertical temperature profile measured along the central axis of the furnace was within the limits specified by the standard.

It follows that the furnace (IN 2579) used for these tests complies with the 1182: 2010 standard for Non-combustibility

=====REPORT ENDS=====