

**bre**global

**Classification of reaction  
to fire performance in  
accordance with BS EN  
13501-1: 2007 +A1: 2009  
on the magnesium oxide  
based core of  
Enviroboards Fireboard**

Prepared for:

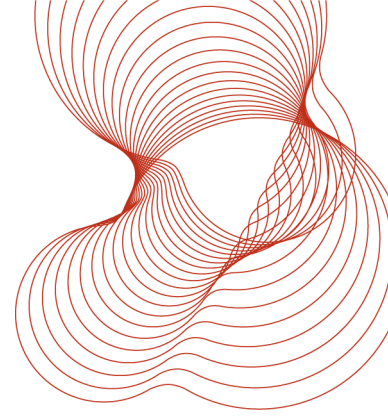
Enviroboards Limited  
New Lodge  
Conholt  
Hampshire Gate  
Andover  
Hampshire  
SP11 9HF, UK

11 October 2011

Test report number 274975  
Issue 1



0578



## 1 Introduction

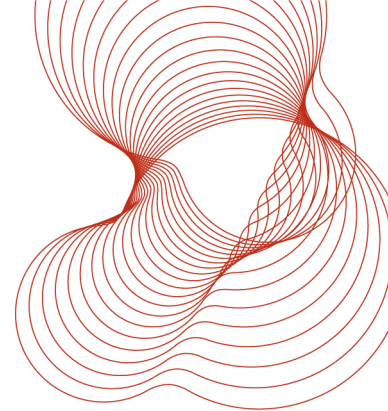
This classification report defines the classification assigned to 'magnesium oxide based core of Enviroboards Fireboard' in accordance with the procedures given in BS EN 13501-1:2007+A1: 2009<sup>1</sup>.



### CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH EN 13501-1: 2007+A1: 2009

<b>Sponsor:</b>	Enviroboards Limited, New Lodge, Conholt, Hampshire Gate, Andover, Hampshire, SP11 9HF, UK.
<b>Prepared for:</b>	Enviroboards Limited, New Lodge, Conholt, Hampshire Gate, Andover, Hampshire, SP11 9HF, UK.
<b>Manufacturer:</b>	Enviroboards Limited.
<b>Place of manufacture:</b>	China.
<b>Prepared by:</b>	BRE Global Ltd., Bucknalls Lane, Garston, Watford, WD25 9XX, England.
<b>Product name:</b>	Magnesium oxide based core of Enviroboards Fireboard.
<b>Classification report No.:</b>	274975
<b>Issue number:</b>	1
<b>Date of issue:</b>	12 October 2011

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## 2 Details of classified product

### 2.1 General

The product, 'magnesium oxide based core of Enviroboards Fireboard', is defined by the test sponsor as a fire resistant board.

### 2.2 Product description

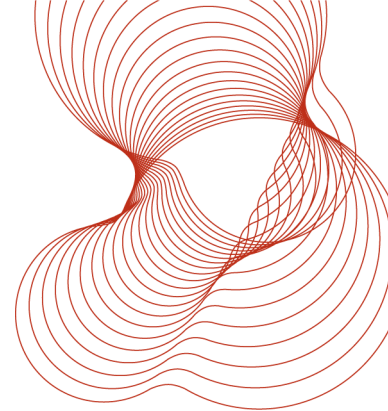
The product, 'magnesium oxide based core of Enviroboards Fireboard', is described in section 2.2.2.

#### 2.2.1 Traceability

The test sample was supplied by the test sponsor. BRE Global 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.

#### 2.2.2 Sample details

Name and address of test sponsor	Enviroboards Limited, New Lodge, Conholt, Hampshire Gate, Andover, Hampshire, SP11 9HF, UK.
Name and address of manufacturer of product	As above.
Place of manufacture	China.
Description of specimens (as received)	EN ISO 1716: An off-white powder.  EN ISO 1182: 32 white discs, nominally 43 mm in diameter and 12 mm thick. A photograph of an EN ISO 1182 test specimen is shown in Figure A.1.  The product definition for a 9 mm thick product is shown in Table A.1.
Description of specimens (Test sponsor's declaration)	Fireproof board.
Product/component tested	Magnesium oxide based core of Enviroboards Fireboard.
Sponsor's specimen ID	9mm board: ENV9mm.
Type of product / component	Fire resistant board.
Nominal density	750 kg/m <sup>3</sup> .
Measured density	744.59 kg/m <sup>3</sup> . Reference: BRE Global report 273528.
Nominal mass per unit area	6.75 kg/m <sup>2</sup> .
Nominal thickness	9 mm.
Colour	White.



### 3 Test reports & test results in support of classification

#### 3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports Nos.	Test method
BRE Global	Enviroboards Limited	273258	BS EN ISO 1182: 2010 <sup>2</sup>
BRE Global	Enviroboards Limited	274076	BS EN ISO 1716: 2010 <sup>3</sup>

#### 3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter-mean (m)	Compliance with parameters (Class A1)
<b>BS EN ISO 1182: 2010</b>  (BREG report 273258)	$\Delta T$	5	2.6 °C	Compliant
	$\Delta m$		43.32 %	Compliant
	$t_f$		0 s	Compliant
<b>BS EN ISO 1716: 2010</b>  (BREG report 274076)	$Q_{PCS}$	3	0.77 MJ/kg	Compliant

### 4 Classification and field of application

#### 4.1 Reference of classification

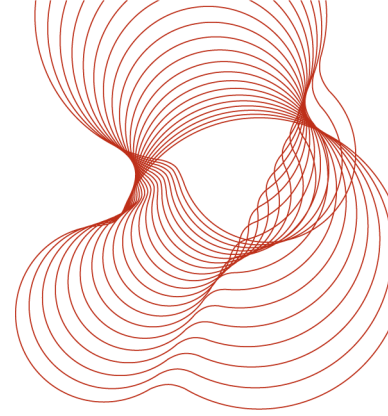
This classification has been carried out in accordance with BS EN 13501-1:2007+A1: 2009.

#### 4.2 Classification

The product 'magnesium oxide based core of Enviroboards Fireboard', in relation to its reaction to fire behaviour is classified:

**A1**

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation products is:



Fire Behaviour		Smoke Production			Flaming Droplets	
A1	-	s	-	,	d	-

i.e. A1

**Reaction to fire classification: A1**

### 4.3 Field of application

The classification is valid for the following end-use application:

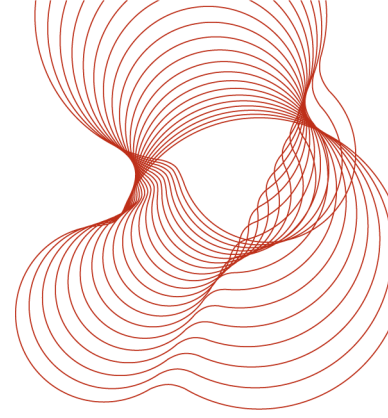
- i) Magnesium oxide based fire resistant board

and for the following product parameters:

Thickness	Valid for all thicknesses.
Density	Nominal 750 kg/m <sup>2</sup> . No variation in density allowed.
Composition	No variation in composition allowed.
Colour	White. No variation in colour allowed.

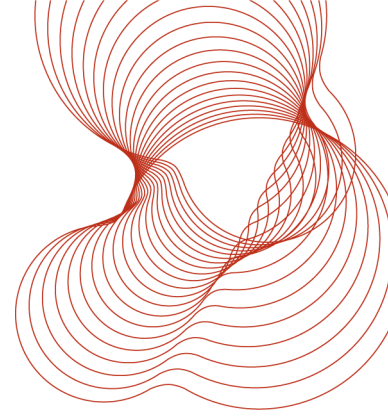
## 5 Limitations

This classification document does not represent type approval or certification of the product.



## 6 References

1. BS EN 13501-1: 2007+A1: 2009. Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests, BSI, 389 Chiswick High Road, London, W4 4AL. 2009.
2. 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.
3. BS EN ISO 1716: 2010. Reaction to fire tests for building products – Determination of the gross heat of combustion (calorific value) (ISO 1716:2010). BSI, 389 Chiswick High Road, London, W4 4AL. 2010.



**Prepared on behalf of BRE Global by**

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Name C A Rock

Position Senior Consultant

Signature

**Approved on behalf of BRE Global by**

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Name S J Howard

Position Principal Consultant

Date 11/10/11

Signature

BRE Global  
Bucknalls Lane  
Watford  
Herts  
WD25 9XX  
T + 44 (0) 1923 664100  
F + 44 (0) 1923 664910  
E [enquiries@breglobal.com](mailto:enquiries@breglobal.com)  
[www.breglobal.com](http://www.breglobal.com)

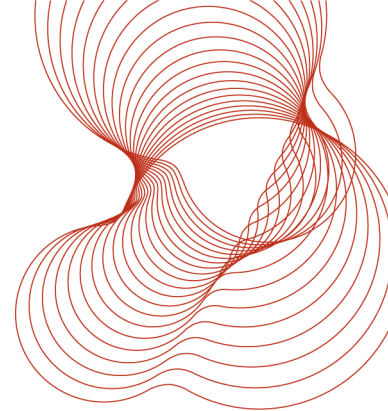
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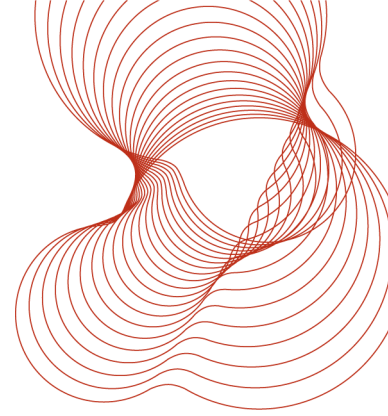


## Appendix A

**Table A.1: Test sponsor's product definition sheet for a 9 mm board**

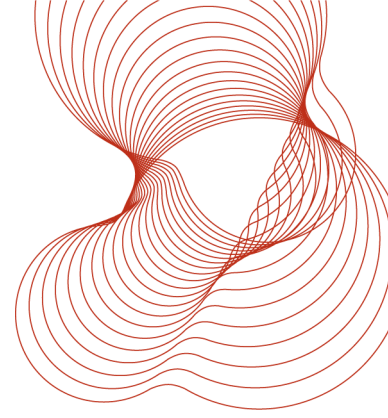
<b>Company: Enviroboards Limited, New Lodge, Conholt, Hampshire Gate, Andover, SP11 9HF</b>	
<b>Parameter</b>	<b>Details</b>
Trade name	Enviroboards
General description	Fireproof board
Name and address of manufacturer of product	As above
Place of manufacture	China
Product reference/number	ENV9mm
Thickness	9 mm
Density	750 kg/m <sup>3</sup>
Mass per unit area	6.75 kg/m <sup>2</sup>
Generic type of product	Magnesium oxide
Flame retardant treatment added or organic content limited during production (yes/no), if yes give details	No
European product standard, if applicable	N/A
Industry/in-house product standard, if applicable	N/A
Attestation of conformity systems	
Interior facing 1 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	
Interior facing 2 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	
Core material - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Magnesium oxide mgo Enviroboards 9 mm  White None None None





**Company: Enviroboards Limited, New Lodge, Conholt, Hampshire Gate, Andover, SP11 9HF**

Parameter	Details
Exterior facing 2- Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Magnesium oxide
Exterior facing 1- Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Fiber glass
Adhesive - Generic type - Product reference - Manufacturer - Application rate - Application method - Specific gravity - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	
Face to be tested	
Orientation aspects	
Sampling Identification Reference	
Additional information:	



**Figure A.1** Photograph of an EN ISO 1182 test specimen as received



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