



CONCRETE CLOTH™

CERTIFICACIÓN RESISTENCIA AL FUEGO



MTP Gold Medal Award
BUDMA 2011



Material ConneXion
MEDIUM AWARD
Material of the YEAR 2009

2009 Winner
Material ConneXion Medium Award
Material of the Year

Concrete Cloth™

La Manta de Hormigón cumple con las regulaciones relativas al fuego para la mayoría de instalaciones públicas y privadas. La Manta es incombustible, no propaga las llamas, tiene un nivel mínimo de humo, unas emisiones mínimas de gases peligrosos.

Euroclases

Antiguamente las regulaciones del fuego variaban de un país a otro. En la actualidad, estas regulaciones nacionales, están siendo reemplazadas por las Euroclases para eliminar los obstáculos al comercio comunitario. Este nuevo sistema de clasificación de las reacciones al fuego de los distintos materiales de construcción para Edificación, fue introducido en Europa por la Directiva Comunitaria 2000/147/EC, de 8 de febrero, implementando la Directiva 89/106/EEC.

Está compuesta de dos subsistemas, uno para materiales de construcción, excluidos los pavimentos, por ejemplo revestimientos y falsos techos. Cada Clase está designada por una letra mayúscula de la A a la F, que indica el comportamiento del material en diferentes las etapas del desarrollo de un incendio, donde las clases A1 y A2 son materiales no combustibles (ver tabla). A continuación vienen modificadas por unos subíndices que indican la cantidad de humo y gotas fuego que desprende. Las Euroclases adicionalmente definen las Normas de acuerdo a las que deben clasificarse los materiales de construcción

La clasificación es la siguiente:

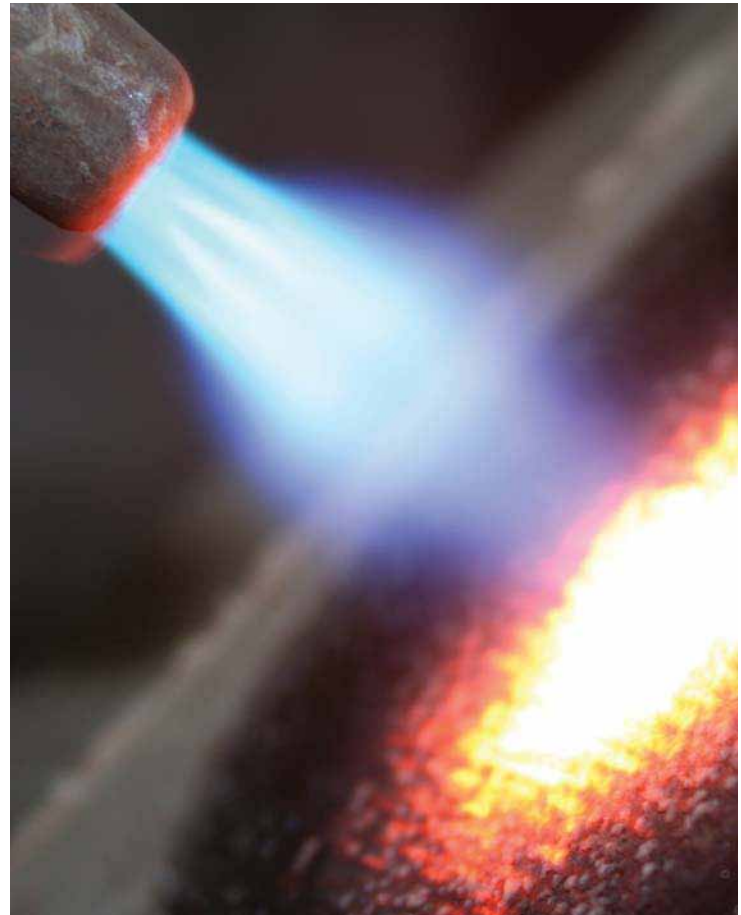
A1	Materiales no inflamables	No contribuye al fuego
A2	Materiales no inflamables	No contribución apreciable al fuego
B	Inflamable	Pequeña o nula contribución.
C	Inflamable	Limitada contribución.
D	Inflamable	Contribuye al fuego.
E	Inflamable	Contribución mayor al fuego
F	Inflamable	Resto de materiales

La Manta de Hormigón tiene la siguiente clasificación:

B-s1, d0

Esta clasificación es la máxima posible para materiales inflamables, y se desglosa como sigue:

B	Los paneles contribuyen poco o insignificadamente al fuego
s1	Los paneles contribuyen poco o insignificadamente al desarrollo del fuego
d0	Los paneles no desprenden partículas incandescentes, ni gotean fuego.





CONFIDENTIAL

Report: Chilt/B09034/06

**Classification of reaction to fire
performance in accordance with
BS EN 13501-1:2007+A1:2009**

Product: Concrete Cloth

Issue date: July 2010

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committed to excellence

www.chilternfire.co.uk

www.chilterndynamics.co.uk

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Prepared for:

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

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Product name: Concrete Cloth

Classification Report No: Chilt/B09034/06

Issue Number: 1

Date of Issue: July 2010

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1 Introduction

This classification report defines the classification assigned to the product, Concrete Cloth, in accordance with the procedures given in BS EN 13501-1:2007+A1:2009.

2 Details of classified product

2.1 General

The product, Concrete Cloth, is a flexible Concrete Cloth to which water is added. The product then sets to form a rigid material. The product has been tested and classified in its rigid form.

2.2 Product description

The product, Concrete Cloth is described briefly below.

Description	Specification
General Description	<p>Dry concrete mix sandwiched within a 3-dimensional fibre matrix.</p> <p>The 3-dimensional fibre matrix incorporates a closed surface (layer 1) and an open surface (layer 3) joined by a monofilament yarn. Layers 1 and 3 as described below are one single product.</p> <p>The PVC sheet (layer 4) is bonded to the open surface.</p> <p>Water is added to the concrete mix which sets to form a rigid material.</p>
Product family	Concrete Cloth in the product range CC4 to CC13
Nominal thickness	4mm to 13mm
Materials used (layers numbered in order from exposed surface to rear of the product)	Layer 1. Polyethylene terephthalate (approximately 0.9mm thick, measured value varies across product range)
	Layer 2. ██████████, cementitious product (range of 3.5mm – 11.6mm thick, depending on product)
	Layer 3. Polyethylene terephthalate (approximately 0.7mm thick, measured value varies across product range)
	Layer 4. PVC (nominal 0.4mm thick)

The product is fully described in the test reports provided in support of classification listed in Clause 3.1 of this document.

3 Test reports/extended application reports and test results in support of classification

3.1 Test reports/extended application reports

Name of Laboratory	Name of Sponsor	Test Reports	Test Method / Extended application standard
Chiltern International Fire Ltd	Concrete Canvas Ltd	Chilt/B09034/01	BS EN ISO 11925-2:2002
Chiltern International Fire Ltd	Concrete Canvas Ltd	Chilt/B09034/02	BS EN ISO 11925-2:2002
Chiltern International Fire Ltd	Concrete Canvas Ltd	Chilt/B09034/03	BS EN 13823:2002
Chiltern International Fire Ltd	Concrete Canvas Ltd	Chilt/B09034/04 /Rev1	BS EN 13823:2002
Chiltern International Fire Ltd	Concrete Canvas Ltd	Chilt/B09034/05	prEN 15725:2008 (E)

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3.2 Test results

Test Method	Number of tests	Parameter	Results	
			Parameter - mean	Compliance with parameters for classification
BS EN ISO 11925-2:2002				
30s exposure		F_s (flame spread)	$F_s \leq 150\text{mm}$ within 60s	compliant
clause 7.3.3.1	18	Flaming droplets/ particles	No ignition of filter paper	compliant
clause 7.3.3.2.2	18			
clause 7.3.3.2.3	36			
BS EN 13823:2002				
BS EN 13823:2002	5	FIGRA 0.2MJ LFS (to edge of specimen)	19.2 <edge of specimen	compliant
		THR 600s	1.66	
		SMOGRA TSP 600s	2.22 30.3	compliant
		Flaming droplets/ particles	No	compliant

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4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of BS EN 13501-1:2007+A1:2009. The classification has been carried out with the "closed surface" (layer 1) face of the product being deemed as the front face.

4.2 Classification

The product, Concrete Cloth, in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets/particles is:

d0

Reaction to fire classification: B-s1, d0

4.3 Field of application

This classification is valid for the following product parameters:

Nominal thickness	4mm to 13mm
Actual thickness	5.1mm to 14.2mm
Colour	Light grey (the exposed surface) Black appearance (the PVC surface)
Mass per unit area	Approximately 1.5 kg/m ² for each mm of actual thickness

The field of application has been extended for product thickness in accordance with CEN/TS 15117 clause 6.2.1

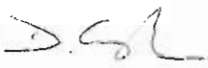


This classification is valid for the following end use applications:

Substrate	Any wood based substrate of Class D-s2,d0 with a density equal to or greater than 510 kg/m ³ . Any substrate of Class A1 or A2-s1,d0 with a density equal to or greater than 510 kg/m ³ .
Air gap	None
Means of fixing	Product fixed to the substrate with wood screws through the product into the substrate.
Corner joint	Butt joint
Horizontal joint	Yes
Vertical joint	Yes
Exposed edges	Yes

5 Limitations

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

6 Authorisation

	Written by:	Checked by:	Authorised by:
Signature:			
Name:	Dawn Simpkins	Philip Howard	Jonathan Osborn
Title:	Senior Technical Officer	Head of Section Fire Behaviour	Chief Operating Officer
Date of issue:	14/7/10		

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