classification report

Bodycote

Title:

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1: 2007

Notified Body No:

0833

Product Name:

Glass Reinforced Concrete, P-GRC

Report No:

170273

Issue No:

1

Prepared for:

The Concrete Society Ltd
Riverside House
4 Merseyside Business Park
Blackwater
GU17 9AB

Date:

23rd January 2008

warringtonfire
global safety
TESTING

1. Introduction

This classification report defines the classification assigned to 'P-GRC', a polymer modified glass fibre reinforced concrete product comprising silica sand, cement, water, superplasticiser and continuous filament alkali resistant glass fibre, in line with the procedures given in EN 13501-1:2007

2. Details of classified product

2.1 General

The product, 'P-GRC', a polymer modified glass fibre reinforced concrete product comprising silica sand, cement, water, superplasticiser and continuous filament alkali resistant glass fibre, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, 'P-GRC', a polymer modified glass fibre reinforced concrete product comprising silica sand, cement, water, superplasticiser and continuous filament alkali resistant glass fibre, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description	Polymer modified glassfibre reinforced concrete
Product reference	"P-GRC"
Composition details	Polymer modified glass fibre reinforced concrete product comprising silica sand, cement, water, superplasticiser and continuous filament alkali resistant glass fibre. **The sponsor has provided more specific details relating to the composition of the product but at the request of the sponsor, these details have been omitted from the report and are held on the confidential file relating to this investigation.**
Name of manufacturer	A member of the GRCA Approved Manufacturers Scheme on behalf of the International Glassfibre Reinforced Concrete Association, which is a Special Sector Group of The Concrete Society. **The sponsor has provided specific details of the manufacturer of product but at the request of the sponsor, these details have been omitted from the report and are held on the confidential file relating to this investigation.**
Density	2000 kg/m³ (stated by sponsor) 2078 kg/m³ (determined by **Bodycote warringtonfire**)
Colour reference	Grey (as determined by **Bodycote warringtonfire**)
Flame retardant details	**The sponsor has confirmed that no flame retardant additives were utilised in the production of the product / component.**

Brief description of manufacturing process	The water, sand and cement and plasticizer and polymer emulsion are blended together in mixer. The alkali resistant glass fibre is then added to the mixture either by blending in a mixer or by introducing the fibre into a spray of the wet slurry. After the GRC has set it is demoulded and cured for a minimum of 7 days.

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

3.1 Test reports/extended application reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Bodycote warringtonfire	The Concrete Society Ltd	WF 167925	EN 13823
Bodycote warringtonfire	The Concrete Society Ltd	WF 165014	EN ISO 1716

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter	Compliance parameters
EN 13823	FIGRA $_{0.2MJ}$	3	1.35	Compliant
	THR $_{600s}$		0.43	Compliant
	LSF		No	Compliant
	SMOGRA		0	Compliant
	TSP_{600s}		12.6	Compliant
EN ISO 1716	PCS ≤ 2.0 MJ/kg (1) PCS ≤ 2.0 MJ/ kg (2) PCS ≤ 1.4 MJ/m² (3) PCS ≤ 2.0 MJ/kg (4)			
	Total (4)	3	0.6453 MJ/kg	Compliant

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2007

4.2 Classification

The product, 'P-GRC', a polymer modified glass fibre reinforced concrete product comprising silica sand, cement, water, superplasticiser and continuous filament alkali resistant glass fibre, in relation to its reaction to fire behaviour is classified:

A2

The additional classification in relation to smoke production is:

S1

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

d0

The format of the reaction to fire classification for construction products excluding floorings is:

Fire Behaviour		**Smoke Production**			**Flaming Droplets**	
A2	**-**	**s**	**1**	**,**	**d**	**0**

i.e. A2 – s1 , d0

Reaction to fire classification: A2-s1,d0

4.3 Field of application

This classification is valid for the following end use applications:

i) Construction Applications mounted with or without an air gap on to any substrate having a density equal to or greater than 800kg/m³, with a minimum thickness of 6mm and a fire performance of A2 or better

This classification is also valid for the following product parameters:

Product thickness	12mm or greater
Product density	Not less than 2000 kg/m³
Product colour/pattern	Any
Product composition	No variation allowed
Product construction	No variation allowed

SIGNED

L. S. Hill

.....

Leigh Hill
Technical Consultant
Technical Department

APPROVED

Janet Murrell

.....

Janet Murrell
Technical Manager
Technical Department
on behalf of:
Bodycote warringtonfire

This copy has been produced from a .pdf format electronic file that has been provided by Bodycote **warrington**fire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Bodycote **warrington**fire. The original signed paper version of this report is the sole authentic version. Only original paper versions of this report bear authentic signatures of the responsible Bodycote **warrington**fire staff.

Bodycote warringtonfire • Head Office • Holmesfield Road • Warrington • Cheshire • WA1 2DS • United Kingdom
Tel: +44 (0) 1925 655 116 • Fax: +44 (0) 1925 655 419 • Email: Info@warringtonfire.net • Website: www.warringtonfire.net