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Testing. Advising. Assuring.

Title:

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

Notified Body No:

0833

Product Name:

"Arcoplast GFRP 9.5"

Report No:

319855

Issue No:

1

Prepared for:

Arcoplast Inc.
1873 Williamstown Drive
St. Peters
MO 63376
United States of America

Date:

5th September 2012



1. Introduction

This classification report defines the classification assigned to "Arcoplast GFRP 9.5", a gel-coated glass fibre reinforced polymer composite, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Arcoplast GFRP 9.5", is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Arcoplast GFRP 9.5", is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Gel coated glass fibre reinforced polymer composite	
Product reference of composite		"Arcoplast GFRP 9.5"	
Name of manufacturer of composite		Arcoplast, Inc.	
Thickness of composite		9mm (stated by sponsor) 9.35mm (determined by Exova Warringtonfire)	
Weight per unit area of composite		15.6kg/m ² (stated by sponsor) 15.88kg/m ² (determined by Exova Warringtonfire)	
Moulded sheet	Generic type	Gel coated glass fibre reinforced sheet	
	Product reference	"Arcoplast GFRP 9.5"	
	Name of manufacturer	Arcoplast, Inc.	
	Colour reference	"White"	
	Thickness	9mm	
	Weight per unit area	See Note 1 below	
	Gel coating	Generic type	Polyester
		Product reference	See Note 2 below
		Name of manufacturer	Ashland
		Colour reference	"White"
		Application thickness	20 mils (0.51mm)
		Application method	Spray
	Flame retardant details	See Note 1 below	
	Resin	Generic type	Acrylic resin
		Product reference	See Note 2 below
		Name of manufacturer	Ashland
		Density	1.05g/cm ³
Trade name of flame retardant		See Note 2 below	
Generic type of flame retardant		Aluminium trihydrate (ATH)	
Amount of flame retardant		160 phr ATH	

Continued on next page

Moulded sheet (continued)	Glass reinforcement	Generic type	Chopped glass strand mat
		Product reference	"E-Glass"
		Number of layers	Seven
		Weight per unit area of each layer	228.73g/m ²
		Name of manufacturer	See Note 2 below
	Percentage glass reinforcement (by weight)	25%	
	Curing process	12 hours at 20°C	
Spline reinforcement	Generic type	Extruded aluminium spline shape moulding	
	Product reference	"AHS 9.5"	
	Name of manufacturer	See Note 2 below	
	Thickness	8.5mm (profile thickness)	
	Density / weight per unit area	See Note 1 below	
	Colour reference	"Aluminium"	
	Flame retardant details	The component is inherently flame retardant	
Mastic	Generic type	Acrylic based adhesive / sealant	
	Product reference	"A-1010"	
	Name of manufacturer	See Note 2 below	
	Colour reference	"White"	
	Application thickness	3mm continuous bead	
	Application method	Manual / pneumatic dispenser	
	Flame retardant details	See Note 1 below	
Mounting and fixing details		Both horizontal and vertical joints were incorporated into the specimens which were tested in direct contact with a plasterboard substrate (in accordance with EN 13238) situated behind the specimen	
Brief description of manufacturing process		Gel coat is sprayed on moulds and allowed to cure 7 continuous layers of chopped strand mat are embedded in an acrylic resin base Panels are allowed to cure for 12 hours at 20°C Panels are removed from the moulds, sanded and cut to length Panels are kerfed for spline fixation Panels are layered with protective film and crated for shipment	

Note 1. The sponsor of the test was unable to provide this information.

Note 2. The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation.

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova warringtonfire	Arcoplast Inc.	WF 319070	EN ISO 11925-2
Exova warringtonfire	Arcoplast Inc.	WF 319071	EN 13823

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN ISO 11925-2 (30s exposure - surface)	F _s	6	Nil	Compliant
	Flaming droplets/ particles		None	Compliant
EN ISO 11925-2 (30s exposure - edge)	F _s	6	Nil	Compliant
	Flaming droplets/ particles		None	Compliant
EN 13823	FIGRA _{0.2MJ}	3	56.58	Compliant
	FIGRA _{0.4MJ}		55.03	Compliant
	THR _{600s}		5.40	Compliant
	LFS		None	Compliant
	SMOGRA		0.00	Compliant
	TSP _{600s}		10.39	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+A1:2009.

4.2 Classification

The product, "Arcoplast GFRP 9.5", a gel-coated glass fibre reinforced polymer composite, 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

The format of the reaction to fire classification for construction applications, excluding flooring and linear pipe thermal insulation is:

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

i.e. **B – s1 , d0**

Reaction to fire classification: B – s1, d0

4.3 Field of application

This classification is valid for the following end use applications:

- i) Construction applications used over any substrate with a density equal to or greater than 700kg/m³, having a minimum thickness of 12.5mm and a fire performance of A2-s1, d0 or better.

This classification is also valid for the following product parameters:

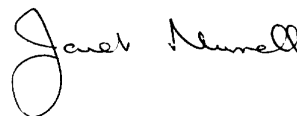
Product thickness	No variation allowed
Product weight per unit area	No variation allowed
Product colour/pattern	No variation allowed
Product composition	No variation allowed
Product construction	No variation allowed

SIGNED



.....
Matthew Dale
Certification Engineer
Technical Department

APPROVED



.....
Janet Murrell
Technical Manager
Technical Department
on behalf of **Exova Warringtonfire**

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