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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 Acryloyl Engineered
Polymers"

Report No:

WF 406133

Issue No:

1

Prepared for:

Arcoplast Inc,
1873 Williamstown Drive,
St Peters,
Missouri,
63376,
USA

Date:

22nd October 2018



1. Introduction

This classification report defines the classification assigned to “Arcoplast Acryloyl Engineered Polymers”, an acryloyl engineered polymer panel for wall and ceiling systems fixed to a metal frame, in accordance with the procedures given in EN 13501-1:2007+A1: 2009

2. Details of classified product

2.1 General

The product, “Arcoplast Acryloyl Engineered Polymers”, is defined as being suitable for wall or ceiling applications.

2.2 Product description

The product, “Arcoplast Acryloyl Engineered Polymers”, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Acryloyl engineered polymer panels for wall and ceiling systems fixed to a metal frame
Product reference of overall composite		“Arcoplast Acryloyl Engineered Polymers”
Name of manufacturer of overall composite		Aristech/Arcoplast
Thickness of overall composite		110mm (determined by Exova Warringtonfire)
Weight per unit area of overall composite		27.56kg/m ² (determined by Exova Warringtonfire)
Panel	Generic type	Specialty materials
	Product reference	“Arcoplast Acryloyl Engineered Polymers”
	Detailed description / composition details	Solid Acrylic Resin and ATH fillers
	Name of manufacturer	Aristech
	Thickness	12.5mm
	Weight per unit area	21.5 kg/m ²
	Colour reference	“White”
	Trade name of flame retardant	“Onyx Elite”
	Generic type of flame retardant	Aluminium Trihydrate ATH
Amount of flame retardant	60%	
Adhesive	Generic type	3M VHB Tape # 4959 & A-2020 Methacrylate Adhesive
	Product reference	“3M VHB Tape # 4959 & A-2020 Methacrylate Adhesive”
	Name of manufacturer	3M & Big Dog Adhesives A-2020
	Colour reference	“White”
	Application rate / thickness	3M tape 3mm & Methacrylate Bead 3mm
	Application method	3M tape rolled & Methacrylate Bead applied by Pneumatic dispenser
	Flame retardant details	See Note 1 below
	Curing process	3M VHB tape maximum cure time 72 hrs. A-2020 Methacrylate cure time 4 hours

Metal frame	Generic type	Steel stud for wall and ceiling construction
	Product reference	"Metal stud framing members"
	Detailed description / composition details	Galvanized steel stud 92mm (3 5/8") 18 Gauge
	Name of manufacturer	Clark Dietrich
	Thickness	92mm (18 Gauge)
	Density / weight per unit area	See Note 1 below
	Colour reference	"Grey"
	Flame retardant details	This component is inherently flame retardant
Sealant	Generic type	Sealant/Adhesive
	Product reference	"Arcoplast Finishing Compound A-1010"
	Name of manufacturer	Lord Adhesives
	Colour reference	"White"
	Application rate / thickness	9.5mm in coving section and 3mm in flat joints
	Application method	Pneumatic dispenser tool
	Flame retardant details	See Note 1 below
	Curing process	72 hours maximum cure
Mounting and fixing details		A 95mm ventilated cavity was situated between the reverse face of each specimen and the calcium silicate backing board
Brief description of manufacturing process		The Arcoplast acryloyl engineered polymer panels were mounted on a typical 92mm (18 gauge) steel stud, spaced typically 16" (400mm) c/c. The joints were also sealed (flat joints) to replicate end use conditions.

Note 1: The sponsor was unable to provide this information.

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
Exova Warringtonfire	Arcoplast Inc	WF 405083	EN 13823
Exova Warringtonfire	Arcoplast Inc	WF 405084	EN ISO 11925-2

3.2 Test results

Test method & test number	Parameter	No. tests	Results		
			Continuous parameter - mean (m)	Compliance parameters	
EN 13823	FIGRA _{0.2MJ}	3	48.06	Compliant	
	FIGRA _{0.4MJ}		48.06	Compliant	
	THR _{600s}		6.96	Compliant	
	LSF		None	Compliant	
	SMOGRA		1.81	Compliant	
	TSP _{600s}		13.35	Compliant	
	Flaming droplets exceeding 10s		None	Compliant	
EN ISO 11925-2	30s exposure - surface	6	F _s	Nil	Compliant
			Flaming droplets/particles	None	Compliant
	30s exposure - edge	6	F _s	Nil	Compliant
			Flaming droplets/particles	None	Compliant

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 10 of EN 13501-1:2007+A1:2009.

4.2 Classification

The product, "Arcoplast Acryloyl Engineered Polymers", an acryloyl engineered polymer panel for wall and ceiling systems fixed in a metal frame, 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

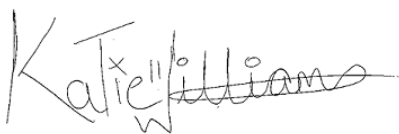
This classification is valid for the following end use applications:

- i) Wall or Ceiling Applications
- ii) Construction applications mechanically fixed with an air gap of 95mm or greater

This classification is also valid for the following product parameters:

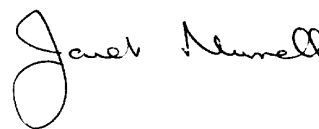
Product Thickness	No variation allowed
Product Weight	No variation allowed
Product Composition	No variation allowed

SIGNED



.....
Katie Williams
Junior Certification Engineer
Technical Department

APPROVED



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

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