

EN 45545-2: 2013



Summary Test Report – Requirement Table 5 (R10)

Test Method References “T04” (EN ISO 9239-1: 2002; Part 1. Determination of the Burning Behaviour Using a Radiant Heat Source), “T10.03” (ISO 5659-2: 2012; Plastics – Smoke Generation. Part 2 Determination of Optical Density by a Single Chamber Method) and “T11.02” (Gas Analysis in the Smoke Box ISO, using FTIR Technique)

A Report To: Scott Bader Company Limited

Document Reference: 354621 & 354622

Date: 31st July 2015

Issue No.: 1

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Testing
Advising
Assuring

Executive Summary


Objective To assess the results of tests performed in accordance with methods T04, T10.03 and T11.02 as defined in EN 45545-2: 2013 at an irradiance level of 25kW/m² with a pilot flame, on specimens of a product and to provide an opinion of compliance with the requirements of R10, as defined in EN 45545-2: 2013.

Generic Description	Product reference	Thickness	Weight per unit area / specific gravity
Gel coated glass reinforced laminate	"70PA Gelcoated Crestapol 1212 Laminate"	4 to 5mm	8.52kg/m ² *
Individual components used to manufacture composite:			
Polyester coating	"Crystic Fireguard Gelcoat 70PA"	500µ	Unwilling to provide
Urethane acrylate resin	"Crestapol 1212 + 170phr ATH"	Not applicable	Unwilling to provide
E glass chopped strand matt	"450g CSM"	Not applicable	4 x 450g/m ²
*determined by Exova Warringtonfire			
Please see page 5 of this test report for the full description of the product tested			


Test Sponsor Scott Bader Company Limited, Wollaston, Wellingbrough, Northamptonshire, NN29 7RL

Opinion We consider the results of the tests detailed above demonstrate that the product, as tested, complies with R10 requirements, (detailed in Table 5 of EN 45545-2: 2013) for a HL1, HL2 and HL3 Hazard Level Classification.

Signatories



Responsible Officer
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 Technical Officer



Authorised
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* For and on behalf of **Exova Warringtonfire**.

Report Issued: 31st July 2015

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Test Details

Terms Of Reference To assess the results of tests performed in accordance with methods T04, T10.03 and T11.02 as defined in EN 45545-2: 2013 at an irradiance level of 25kW/m^2 with a pilot flame, on specimens of a product and to provide an opinion of compliance with the requirements for floor composites, as defined in EN 45545-2: 2013.

Introduction Specimens of a product have been tested in accordance with the test methods "T04" (EN ISO 9239-1: 2002; Part 1. Determination of the Burning Behaviour Using a Radiant Heat Source), "T10.03" (ISO 5659-2: 2012; Plastics – Smoke Generation. Part 2 Determination of Optical Density by a Single Chamber Method) and "T11.02" (Gas Analysis in the Smoke Box ISO, using FTIR Technique) as specified in EN 45545-2:2013 "Requirements for Fire Behaviour of Materials and Components". The results of the tests are fully reported in the **Exova Warringtonfire** test reports No's. 354621 & 354622.

This summary report has been prepared at the request of the sponsor and relates the results of the tests to the requirements for a floor composite R10, as defined in Table 5 of EN 45545-2: 2013.

This summary should be read in conjunction with, and not accepted as a substitute for the **Exova Warringtonfire** test reports No's. 354621 & 354622. Those test reports may include additional information which may be relevant to the assessment of the potential fire hazard of the product.

Face subjected to tests The specimens were mounted in the test positions such that one of two identical faces was exposed to the heating conditions of the tests.

Results of test The following results were obtained for the specimens, which were tested.

"T04" ISO 9239-1: 2002

Average critical radiant flux = $\geq 11.0\text{kW/m}^2$

"T10.03" ISO 5659-2: 2012

$D_s \text{ max} = 110$

"T11.02" Gas Analysis in the Smoke Box ISO, Using FTIR Technique

$CIT_{4\text{mins}} = 0.06$

$CIT_{8\text{mins}} = 0.14$

The test results relate only to the behaviour of the test specimens of the product under the particular conditions of the test, they are not intended to be the sole criterion for assessing the potential hazard of the product in use.

Description of Test Specimens

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given. The specimens were supplied by the sponsor of the test. **Exova Warringtonfire** was not involved in any selection or sampling procedure.

General description		Gel coated glass reinforced laminate	
Product reference		"70PA Gelcoated Crestapol 1212 Laminate"	
Name of manufacturer		Scott Bader	
Thickness		4 to 5mm (stated by sponsor) 4.85mm (determined by Exova Warringtonfire)	
Weight per unit area		8.52kg/m ² (determined by Exova Warringtonfire)	
Moulded Sheet	Gel-coat	Generic type	Polyester
		Product reference	"Crystic Fireguard Gelcoat 70PA"
		Name of manufacturer	Scott Bader
		Colour	"White/Off White"
		Application thickness	500microns
		Specific gravity	See Note 1 Below
		Application method	Spray
	Resin	Generic type	Urethane acrylate
		Product reference	"Crestapol 1212 + 170phr ATH"
		Name of manufacturer	Scott Bader
		Specific gravity	See Note 1 Below
		Flame retardant details	See Note 1 Below
	Fibre reinforcement	Generic type	E-glass chopped strand matt (CSM)
		Product reference	"450g CSM"
		Number of layers	4
		Weight per unit area of each layer	450g/m ²
		Configuration of glass reinforcement	Random chopped strand
		Name of manufacturer	Binani
	Resin to glass ratio (by weight)		3.5:1
	Percentage glass reinforcement (by weight)		See Note 1 Below
	Curing process (duration and temperature)		12 hours at 40°C
Brief description of manufacturing process		Spray gel coat plus hand laminate	

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

Classification

Opinion

We consider the results of the tests detailed above demonstrate that the product, as tested, complies with R10 requirements, (detailed in Table 5 of EN 45545-2: 2013) for a HL1, HL2 and HL3 Hazard Level Classification.

Validity of opinion

This opinion is based on the requirements of EN 45545-2:2013 at the date of this report. If EN 45545-2 is revised or amended in any way subsequent to that date, care must be taken to ensure that this opinion is not invalidated by those revisions or amendments.

The opinion has been formulated on the assumption that the specimens are representative of the product in practice. **Exova Warringtonfire** was not involved in any sampling or selection procedures which would confirm this or in any audit testing which would provide confidence in the consistency of the product in the tests.

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Revision History

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