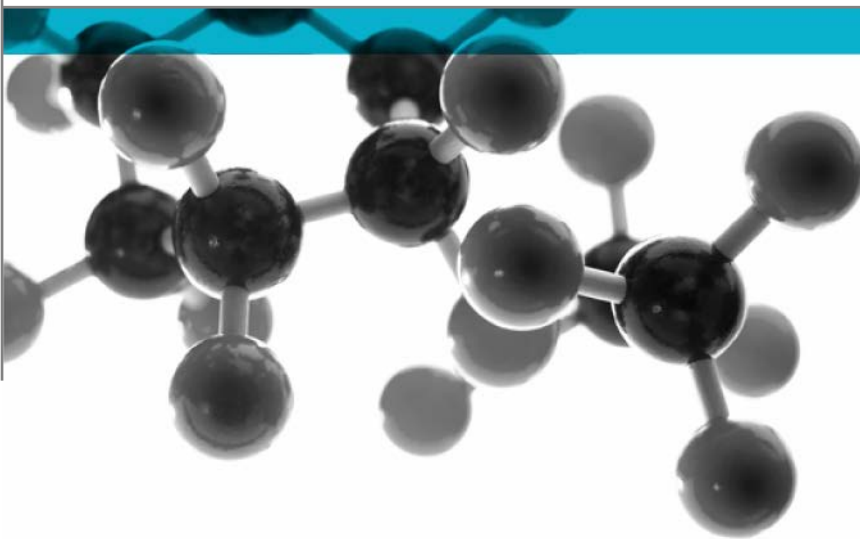


UN Regulation No. 118 Annex 7



Test To Determine The Melting Behaviour Of Materials

A Report To: Clark Wright

Document Reference: 367224

Date: 15th June 2018

Issue: 1

Page 1

Testing
Advising
Assuring

Executive Summary

Objective To determine the performance of the following product when tested in accordance with UN Regulation No. 118 Annex 7.


Generic Description	Product reference	Thickness	Weight per unit area
Coated woven fabric applied to a mineral fibre insulation and e glass backing	"eQUILT"	16mm	8kg/m ²
Individual components used to manufacture composite:			
Coating	Unwilling to provide	6 X 33μ	Not stated
Woven fabric	Unwilling to provide	1mm	850-900g/m ²
Adhesive	Unwilling to provide	Not stated	Not stated
Insulation	Unwilling to provide	12mm	130g/m ²
Backing	Unwilling to provide	0.5mm	Not stated
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor Clark Wright, 6 Atkins Close, Biggin Hill, Westerham, Kent, TN16 3GB


Test Results: When tested in accordance with UN Regulation No. 118 Annex 7, the product submitted for test did not produce droplets which ignited the cotton wool and therefore, in accordance with Section 6.2.2 of the standard, the test results are deemed to be satisfactory.

Date of Test 13th June 2016

Signatories



Responsible Officer
 C. Jacques *
 Technical Officer



Authorised
 T. Mort *
 Senior Technical Officer

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

Report Issued: 15th June 2018

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 Author: C. Jacques
 Client: Clark Wright

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Test Details

Purpose of test	<p>To determine the performance of the material when it is tested in accordance with UN Regulation No. 118 Annex 7, a test to determine the melting behaviour of materials.</p> <p>The test was performed in accordance with the test procedure specified in UN Regulation No. 118 Annex 7 and this test report should be read in conjunction with that Standard.</p>
Fire test study group/EGOLF	<p>Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and has agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.</p>
Instruction to test	<p>The test was conducted on the 13th June 2016 at the request of Clark Wright, the sponsor of the test.</p>
Provision of test specimens	<p>The specimens were supplied by the sponsor of the test. Exova Warringtonfire was not involved in any selection or sampling procedure.</p>
Conditioning of specimens	<p>The specimens were received on the 10th June 2016.</p> <p>Prior to the test the specimens were conditioned for at least 24 hours in an atmosphere having a temperature of $23 \pm 2^{\circ}\text{C}$ and a relative humidity of $50 \pm 5\%$.</p>
Test procedure	<p>The specimens were placed in a horizontal position and exposed to an electric radiator. A receptacle containing cotton wool was positioned under the specimen to collect droplets. Cotton wool was put in the receptacle in order to verify if any drops were flaming.</p>
Specimen orientation	<p>Both faces of the specimens were exposed to the radiant heat of the test when the specimens were mounted in the test position.</p>

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Description of Test Specimens

No information regarding the composition of the specimens was received at the time of the test. The sponsor has subsequently provided the following description of the specimens and has requested that a report be issued. This information has not been independently verified by **Exova Warringtonfire**. All values quoted are nominal, unless tolerances are given.

General description		Coated woven fabric applied to a mineral fibre insulation and e glass backing
Product reference		"eQuilt"
Name of manufacturer		Clark Wright Limited
Overall thickness		16mm (stated by sponsor)
Thickness tested		12.65mm (determined by Exova Warringtonfire)
Overall weight per unit area		8kg/m ² (stated by sponsor) 5.55kg/m ² (determined by Exova Warringtonfire)
Coating	Generic type	Aluminium loaded silicone
	Product reference	See Note 1 Below
	Name of manufacturer	See Note 1 Below
	Colour reference	"Grey/silver"
	Number of coats	6
	Application thickness per coat	33µ
	Specific gravity	± 1.3
	Application method	In-line doctor die
	Curing process per coat	In-line UV
Flame retardant details		See Note 2 Below
Woven Fabric	Generic type	Continuous Mineral Fibre
	Product reference	See Note 1 Below
	Name of manufacturer	See Note 1 Below
	Colour reference	"Brown"
	Thickness	1mm
	Weight per unit area	850 – 900g/m ²
	Type of weave / cell dimensions	Satin
	Flame retardant details	
Adhesive	Generic type	Assembly/contact
	Product reference	See Note 1 Below
	Name of manufacturer	See Note 1 Below
	Colour reference	"Golden"/"spider-web"
	Application rate / thickness	See Note 1 Below
	Application method	spray
	Flame retardant details	
Curing process		air
Insulation	Generic type	Continuous mineral fibre
	Product reference	See Note 1 Below
	Name of manufacturer	See Note 1 Below
	Colour reference	Golden/brown
	Thickness	12mm
	Weight per unit area	
Flame retardant details		See Note 2 Below

- Continued on next page

Backing	Generic type	E-glass
	Product reference	See Note 1 Below
	Detailed description / composition details	Polyurethane coated 200gsm
	Name of manufacturer	See Note 1 Below
	Thickness	0.5mm
	Density / weight per unit area	See Note 1 Below
	Colour reference	"Black"
	Flame retardant details	See Note 1 Below
Brief description of manufacturing process		Laminations cut to each panel template, including an allowance for edging and seaming. Laminations assembled with light application of fire rated contact adhesive to maintain accurate location of the laminations, one to another. Edges sewn to box section. Stitch-line uses Fire rated thread, and sealed with optically clear RTV-Silicone.

Note 1: The sponsor of the test was unwilling to provide this information

Note 2: The sponsor of the test has confirmed that no flame retardants were used in the production of this component.

Test Results

Test Face	Decorative			
	Specimen No.			
	1	2	3	4
Weight (g)	32.09	31.71	33.11	32.26
Flaming droplets produced?	No	No	No	No
Non-flaming droplets produced?	No	No	No	No
Combustion of product				
Time to ignition (seconds)	128	125	53	50
Duration of flaming (seconds)	26	39	9	10
Length of flame (mm)	100	100	50	50
Ignition of cotton wool?	No	No	No	No
Comments:				
In the case of each specimen tested, black residue remained on the gauze following the test.				

Test Face	Back face			
	Specimen No.			
	1	2	3	4
Weight (g)	31.45	33.87	32.21	31.31
Flaming droplets produced?	No	No	No	No
Non-flaming droplets produced?	No	No	No	No
Combustion of product				
Time to ignition (seconds)	Nil	Nil	44	Nil
Duration of flaming (seconds)	Nil	Nil	15	Nil
Length of flame (mm)	Nil	Nil	50	Nil
Ignition of cotton wool?	No	No	No	No
Comments:				
In the case of each specimen tested, black residue remained on the gauze following the test.				

Conclusion

When tested in accordance with UN Regulation No. 118 Annex 7, the product submitted for test did not produce droplets which ignited the cotton wool and therefore, in accordance with Section 6.2.2 of the standard, the test results are deemed to be satisfactory.

Applicability of test results

The test results relate only to the behaviour of the specimens under the particular conditions of this test, they should not be used to infer the fire hazards of the material in other forms or under other fire conditions.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.

Validity

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

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