

Classification report for roofs / roof coverings exposed to external fire

Issuing laboratory: Warringtonfire Testing and
Certification Limited

Classification standards: EN 13501-5: 2016

Report sponsor(s): Westlake Tapco Europe Ltd

Product(s): “704UK”


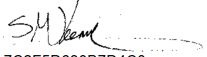
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Warringtonfire Testing and Certification Limited , accredited for compliance with ISO/IEC 17025:2017 – Testing



Quality management

Version	Date	Summary of amendments including reasons	
1	3 July 2025	Description	Initial issue
		Name	Prepared by
		Signature	Authorised by
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			*Signed for and on behalf of Warringtonfire Testing and Certification Limited

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1. Introduction

This classification report defines the classification assigned to roof / roof covering “704UK”, in accordance with the procedures given in EN 13501-5: 2016.

Warringtonfire Testing and Certification Limited (Warringtonfire) issued the classification report at the request of the report sponsor listed in Table 1.

Table 1 Sponsor details

Entity	Address
Sponsor	
Westlake Tapco Europe Ltd.	Unit 32 Tokenspire Business Park, Hull Road, Woodmansey, Beverley, East Yorkshire, HU17 0TB, United Kingdom

2. Details of classified product

2.1 General

The product, “704UK” is defined as being suitable for roof / roof covering applications.


2.2 Product description

The roof/roof covering, “704UK” is described in Table 2 and in the test reports listed in Section 3.1.

Table 2 Product description

Item	Detail
General description	Composite roof panel comprising: <ul style="list-style-type: none"> • Slate tile • Timber battens • Hessian backed underlay • Timber support framework
Product reference	“704UK”
Name of manufacturer	DaVinci Roofscapes
Overall thickness	130mm (stated by sponsor) 130mm (determined by Warringtonfire)
Overall weight per unit area	31.09kg/m ² (stated by sponsor) 31.41kg/m ² (determined by Warringtonfire)


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Item		Detail
Slate	Generic type	Polypropylene, limestone, composite roofing tiles with pigment blend, UV absorber and additives
	Product reference	"TapcoSlate"
	Name of manufacturer	DaVinci Roofscapes
	Colour reference	"804"
	Colour	Grey
	Thickness	5±1mm
	Dimensions	430mm x 295mm total tile size (determined by Warringtonfire) 150mm x 295mm exposed tile size (determined by Warringtonfire)
	Spacing between tiles	6mm (determined by Warringtonfire)
	Weight per unit area	16.28kg/m ²
	Trade name of flame retardant	See Note 1 below
	Generic type of flame retardant	Magnesium hydroxide
	Amount of flame retardant	14%
	Fixing details	2 x cross head screws per tile spaced laterally 150mm apart and 160mm apart down the fall line of the specimen from the next tile layer fixings. (Fixings were covered by the previous tile layer overlap) 
Brief description of manufacturing process		Resins and additives are compounded together in a proprietary formulation. This compound is then compression moulded with colour concentrate to form the roofing tiles
Timber battens	Generic type	Wooden battens
	Product reference	"T002413"
	Name of manufacturer	MKM Building Supplies
	Dimensions	25mm x 50mm x 835mm
	Spacing of battens	152mm centre lines
	Weight per unit area	6.51kg/m ²
	Flame retardant details	See Note 2 below

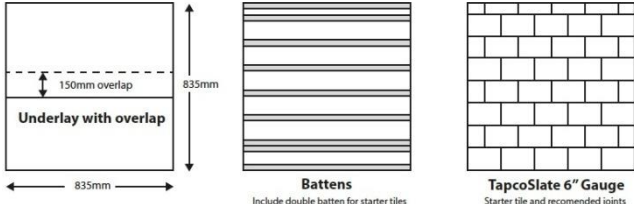
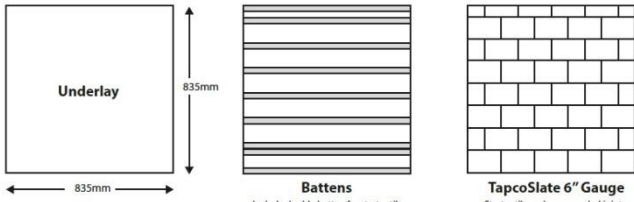
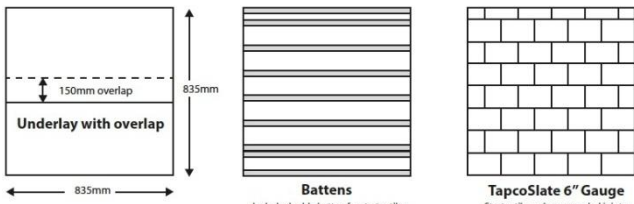
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Item		Detail
Underlay	Generic type	Hessian backed bitumen (high water vapour resistance) underlay
	Product reference	"Type HR Underlay"
	Name of manufacturer	Chesterfelt
	Thickness	1 ± 0.1mm
	Weight per unit area	1.5kg/m ²
	Fixing details	Stapled to timber frame
	Bitumen	Generic type
		Product reference
		Name of manufacturer
		Colour
		Thickness
		Weight per unit area
		Flame retardant details
	Hessian material	Generic type
		Product reference
		Name of manufacturer
		Colour
		Thickness
		Weight per unit area
		Flame retardant details

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Item		Detail
Timber support framework	Generic type	Timber
	Product reference	"Timber 4" x 2" (38mm x 90mm Finished Size) 2.4m"
	Name of manufacturer/supplier	MKM Building Supplies
	Thickness	101.6mm
	Dimensions	2 x 835mm x 90mm x 40mm timber* 3 x 735mm x 90mm x 40mm timber* *(determined by Warringtonfire)
		
	Weight per unit area	24kg/m ²
	Density	236.22kg/m ³
	Flame retardant details	See Note 2 below
	Fixing details	6 x cross head screws per 835mm length timber were used to fix the framework together. These were in pairs 50mm apart vertically and 390mm horizontally from the next pair.
Brief description of manufacturing process of complete system		Square timber framework created with 4" x 2" timber joints secured with 80mm screws, with centre cross member. Underlay laid over timber framework and secured with staples. 50mm x 25mm battens secured with 50mm screws to the timber frame at the top and bottom edge of the frame. The first batten is placed at 190mm from leading edge of bottom batten to create centre line of first batten. The second batten is secured directly underneath the first batten. Subsequent battens secured at 152mm centre lines from the centre line of the first batten. 305mm high eaves course of roofing tiles created and laid to the leading edge of the structure, followed by the first course laid over these broken bond fashion. Subsequent courses laid in broken bond fashion to cover the entire surface. Cut all edges as appropriate. All tiles secured by 2 x 30mm screws

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Item	Detail
Joint details	<p>The top layer tiles formed lap joints with a 280mm overlap at intervals of 160mm laterally across all specimens.</p> <p>One specimen contained no further joints other than those in the tile layer.</p> <p>Three specimens contained a lap joint in the underlay with a 150mm overlap oriented laterally across the specimens.</p>
Photograph of joints	<p>2 x SAMPLE A:</p>  <p>1 x SAMPLE B:</p>  <p>1 x SAMPLE C: note that this is exactly the same as SAMPLE A but labelled as SAMPLE C</p> 

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

Note 2: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

3. Test reports and test results in support of classification

3.1 Test reports

Table 3 details the test reports that have been used in support of classification.

Table 3 Test reports

Name of laboratory	Name of sponsor(s)	Test report no.	Test date	Test and extended application standard
Warringtonfire	Westlake Tapco Europe Ltd	550581	26 and 28 March 2025	CEN/TS 1187: 2012

3.2 Test results

3.2.1 Official test results used for the classification

Table 4 details the test results that have been used in support of classification. The fire performance parameters for class B_{ROOF}(t4) can be found in Table 6.

Table 4 Test data

Test pitch: 45°

Timber support framework: 101.6mm, 236.22kg/m³

Test method Report number	Parameter	Number of tests	Results		Compliant?
CEN/TS 1187: 2012: T4 – Preliminary test 550581	Burn time (min:sec)	1	0:02		Yes
	Flame spread distance (mm)		125		Yes
	Penetration time (min:sec)		Did not penetrate		Yes
CEN/TS 1187: 2012: T4 – Penetration test 550581	Penetration time (min:sec)	3	Specimen 1:	Did not penetrate	-
			Specimen 2:	Did not penetrate	-
			Specimen 3:	Did not penetrate	-
			Mean:	N/A	Yes

Note: '-' symbol confirms this parameter is not applicable.

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with EN 13501-5: 2016.

4.2 Classification

The roof / roof covering “704UK” in relation to its external fire performance is classified as:

B_{ROOF}(t4)

4.3 Field of application

The classification for the product described in Section 2.2 of this report is valid the following conditions:

Direct Field of application

End use	Description	Origin
Roof pitch	$10^{\circ} < \text{pitch} \leq 70^{\circ}$	Table B.4 of EN 13501-5: 2016
Timber support framework	As tested: 2 x 835mm x 90mm x 40mm timber* 3 x 735mm x 90mm x 40mm timber* Weight per unit area - 24kg/m ² Density - 236.22kg/m ³	Table B.4 of EN 13501-5: 2016

Overall product

End use	Description	Origin
Generic type and product reference	Slate panel with underlay "704UK"	N/A
Thickness	6 ±1mm – No variation allowed	N/A
Weight per unit area	17.78kg/m ² – No variation allowed	N/A
Construction	No variation allowed	N/A
Composition	No variation allowed	N/A
Use of flame retardants	No variation allowed	N/A
Joints	No variation allowed	N/A

Layer 1 - Slate

End use	Description	Origin
Generic type and product reference	Composite roofing tiles "TapcoSlate"	N/A
Thickness	5±1mm (no variation allowed)	N/A
Weight per unit area	16.28kg/m ² (no variation allowed)	N/A
Dimensions	430mm x 295mm total tile size (no variation allowed) 150mm x 295mm exposed tile size (no variation allowed)	N/A
Spacing between tiles	6mm (no variation allowed)	N/A
Colour	Grey (no variation allowed)	N/A
Fixing details	2 x cross head screws per tile spaced laterally 150mm apart and 160mm apart down the fall line of the specimen from the next tile layer fixings. (Fixings were covered by the previous tile layer overlap)	N/A
Flame retardant details	No variation allowed	N/A

Layer 2 – Underlay

End use	Description	Origin
Generic type and product reference	Hessian backed bitumen comprising 0.5 ± 0.5 mm bitumen applied to 0.5 ± 0.5 mm hessian backing "Type HR Underlay"	N/A
Overall thickness	1 ± 0.1 mm	N/A
Overall weight per unit area	1.5kg/m^2	N/A
Colour	Black	N/A
Flame retardant details	No variation allowed	N/A

4.4 Fire performance parameters for B_{ROOF} (t4)

All the products described in Section 2.2 and within the field of application defined in Section 0 comply with the fire performance parameters shown in Table 6. The test results can be found in Section 3.2.

Table 6 Fire performance parameters for B_{ROOF} (t4)

Test method	Parameter	Classification Criteria
Stage 1 - Preliminary test	Burn time	< 5 min
	Flame spread	< 0.38 m
	Penetration	No penetration
Stage 2 - Penetration test	Penetration	≥ 60 min

5. Restrictions

At the time the standard EN 13501-5: 2016 was published, no decision was made about the duration of validity of a classification report.

When this report is used to support UKCA marking under the Construction Products Regulation 2011 (retained EU law EUR 2011/305) as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and/or 'CE+UK(NI)' marking for Northern Ireland under the Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011, the provisions of those regulations prevail over any conflicting provisions in the designated/harmonised standards and technical specifications.

6. Limitations

According to the information mentioned by the sponsor on the technical information sheet there was no harmonised product standard for UKCA or CE+UK(NI) marking available at the time the classification report for the tested material/product was drafted. When such a product standard is published, this report may be submitted again to the laboratory to evaluate the adequacy of the report for UKCA or CE+UK(NI) marking.

The test laboratory played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide evidence for the traceability of the samples tested.

7. Validity

This document is the original version of this classification report and is written in English. In case of doubt the original version prevails over a translation.

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The classification results relate to the behaviour of a product under the particular conditions of the test(s); they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use, nor can the classification results be extrapolated and applied to other products, or imply suitability for use in configurations not specifically detailed in the classification report. The classification is based on the information available to Warringtonfire at the time of the report. Should conflicting or contradictory evidence become available, Warringtonfire reserves the right to unconditionally withdraw the classification report forthwith upon giving written notice of the same.

Reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 3 of this report. Test, classification and extended application are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this classification report apply to the test specimens as received and/or specified in the referenced/supporting test reports. Any differences in composition, production process, thickness, density or colour of the product may significantly affect the performance and will therefore invalidate the application of the test and classification results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the sponsor. The sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

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