

Reaction to fire classification report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Classification standard: EN 13501-1: 2018

Report owner(s): Dura Composites Ltd

Product(s): "Dura Deck Aluminium Positive-Drain 18mm"

Report number: 533077

Version: 1

Quality management

Version	Date	Summary of amendments including reasons	
1	21 July 2023	Description	Initial issue
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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 "Dura Deck Aluminium Positive-Drain 18mm", in line with the procedures given in EN 13501-1: 2018.

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

Table 1 Report owner details

Entity	Address
Report owner	
Dura Composites Ltd	Dura House Telford Road, Clacton-On-Sea, Essex, CO15 4LP, United Kingdom

2. Details of classified product

2.1 General

The product(s), "Dura Deck Aluminium Positive-Drain 18mm", are defined as being suitable for flooring applications.

2.2 Product description

The product(s), "Dura Deck Aluminium Positive-Drain 18mm", are described in Table 2 and in the test reports listed in Section 3.1.

Table 2 Product description

Item	Detail
General description	Coated Aluminium – Deck Flooring
Product reference of overall composite	"Dura Deck Aluminium Positive-Drain 18mm"
Name of manufacturer	Dura Composites Ltd
Wall thickness	2 ± 1 mm (stated by sponsor) 1.51 mm (Average value - determined by Warringtonfire)
Overall thickness (profiled)	18 mm (stated by sponsor) 17.8 mm (Average value - determined by Warringtonfire)
Overall weight per unit area	10.51 kg/m ² (stated by sponsor) 9.3 kg/m ² (Average value - determined by Warringtonfire)
Overall weight per unit length	1.51 kg/m (stated by sponsor) 2.15 kg/m (Average value - determined by Warringtonfire)

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Item	Detail		
Coating (test face)	Generic type	Polyester coating	
	Product reference	"Interpon 810 Series"	
	Name of manufacturer	Akzo Nobel Powder Coatings	
	Colour reference	RAL 7001 – Mist (Tested) RAL 7043 – Anthracite (Tested) RAL 1019 – Cedar (Tested) RAL 7006 – Beige Grey RAL 7016 – Anthracite Grey RAL 7037 – Dusty Grey RAL 8003 – Clay Brown RAL 8014 – Sepia Brown RAL 8017 – Chocolate Brown RAL 8019 – Grey Brown RAL 7030 – Stone Grey RAL 7039 – Quartz Grey RAL 7040 – Window Grey	
	Colour	As listed above	
	Number of coats	1	
	Application thickness per coat	80 microns	
	Application rate per coat	167 g/m ²	
	Density	1.45 ± 0.25 g/cm ³	
	Application method	Electrostatically applied	
	Flame retardant details	See Note 1 below	
	Curing process	Heated to 180°C	
	Aluminium	Generic type	Aluminium extrusion
		Product reference	"6063 T6"
Name of manufacturer		Dura Composites Ltd	
Thickness		1.45 mm	
Weight per unit area		10.056 kg/m ²	
Weight per unit length		1.508 kg/m	
Flame retardant details		See Note 1 below	
Mounting and fixing	The specimens were tested with an 8mm thick fibre cement board substrate (as specified in EN 138238: 2010) present		
Brief description of Manufacturing Process of Coatings	Coating applied to aluminium product using static process and then oven-baked to cure		

Note 1: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the product / 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	Dura Composites Ltd	532966	31 May and 06 June 2023	EN ISO 9239-1: 2010
Warringtonfire	Dura Composites Ltd	532968	28 May 2023	EN ISO 1716: 2018 (*)
Warringtonfire	Dura Composites Ltd	532969	28 May 2023	
Warringtonfire	Dura Composites Ltd	532970	30 May 2023	
Warringtonfire	Dura Composites Ltd	533446	-	
Warringtonfire	Dura Composites Ltd	532965	31 May 2023	EN ISO 9239-1: 2010
Warringtonfire	Dura Composites Ltd	532967	31 May 2023	
Warringtonfire	Dura Composites Ltd	533078	-	CEN/TS 15117: 2005 EN 15725: 2010

(*) As the test procedure for EN ISO 1716 remained identical for versions 2010 & 2018 and no substantial technical changes were noticed in the most recent version 2018, results obtained with the 2018 version can also be considered valid for classification purposes (where only the 2010 version is mentioned).

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 A2_{FL} - s1 can be found in Table 7.

Table 4 Test data

Test method Report number	Parameter	Number of tests	Results	
			Continuous parameters	Compliance with parameters
EN ISO 9239-1: 2010 532966	Critical heat flux, (kW/m ²)	4	≥ 11	-
	Average smoke development, (%.min)		4	-
EN ISO 1716: 2018 532968	Average gross heat of combustion for (NON)SUBSTANTIAL component (Polyester coating "RAL 7001" (Mist colour)), Q _{PCS} (MJ/m ²)	1 x 3	2.9	-
EN ISO 1716: 2018 532969	Average gross heat of combustion for (NON)SUBSTANTIAL component (Polyester coating "RAL 1019" (Cedar colour)), Q _{PCS} (MJ/m ²)	1 x 3	3.3	-
EN ISO 1716: 2018 532970	Average gross heat of combustion for (NON)SUBSTANTIAL component (Polyester coating "RAL 7043" (Anthracite colour)), Q _{PCS} (MJ/m ²)	1 x 3	2.8	-
EN ISO 1716: 2018	Average gross heat of combustion for SUBSTANTIAL component (Aluminium) Q _{PCS} (MJ/kg)	-	0.0	-
EN ISO 1716: 2018 533446	Average gross heat of combustion for whole product using worst case colour ("RAL 1019" (Cedar colour)), Q _{PCS} (MJ/kg)	-	0.3	-

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

3.2.2 Comparative test results used for the worst case determinations

The tables below detail the test data that has been used to determine the worst case for each product parameter.

Table 5 EN ISO 9239

Product name Report number	Parameter	Number of tests	Results	
			Continuous parameters	Compliance with parameters
Project specification; "RAL 1019" (Cedar colour) Production direction; 532966*	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		5	-
Project specification; "RAL 1019" (Cedar colour) 90° to production direction; 532966*	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		3	-
Project specification; "RAL 7001" (Mist colour) Production direction; 532965	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		1	-
Project specification; "RAL 7001" (Mist colour) 90° to production direction; 532965	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		3	-
Project specification: "RAL 7043" (Anthracite colour) Production direction; 532967	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		1	-
Project specification; "RAL 7043" (Anthracite colour) 90° to production direction; 532967	Critical heat flux, (kW/m ²)	1	≥ 11	-
	Average smoke development, (%.min)		3	-

(*) The results of this sample were re-used in the official test report No. 532966 (as test specimen 1).

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 13501-1:2018.

4.2 Classification

The product "Dura Deck Aluminium Positive-Drain 18mm" in relation to its reaction to fire behavior is classified as:

A2_{FL}

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for flooring applications products is:

Fire behaviour		Smoke production	
A2 _{FL}	-	s	1

Alternatively shown:

Reaction to fire classification: A2_{FL} - s1

4.3 Field of application

The classification for the product described in Section 2.2 of this report is valid for end-use applications described in Table 6.

Table 6 End-use applications

End use	Description	Origin
Substrate	Any substrate with a density equal to or greater than 1350 kg/m ³ , a minimum thickness of 6 mm and a fire performance of A2FL-s1, d0 or better.	As per EN 13238: 2010, clause 5.2 and EGOLF recommendation 045-2018.
Airgap	No air gap allowed	N/A

This classification is valid for the following product parameters:

- Wall thickness: No variation allowed
- Number of coats of coating: No variation allowed
- Coating application thickness: No variation allowed
- Coating application rate: No variation allowed
- Coating density: No variation allowed
- Coating application method: No variation allowed
- Coating colour: Only specific colours allowed, see product description
- Aluminium thickness: No variation allowed
- Aluminium weight per unit area: No variation allowed
- Aluminium weight per unit length: No variation allowed
- Construction: No variation allowed
- Composition: No variation allowed

4.4 Fire performance parameters for A2_{FL} - s1

All the products described in Section 2.2 and within the field of application defined in Section 4.3 comply with the fire performance parameters shown in Table 7. The test results can be found in Section 3.2.

Table 7 Fire performance parameters for A2_{FL} - s1

Test method	Parameter	Continuous parameters	Compliance with parameters
EN ISO 9239-1: 2010	Critical heat flux, (kW/m ²)	CHF ≥ 8,0 kW/m ²	-
	Average smoke development, (%.min)	Smoke ≤ 750 %.min	-
EN ISO 1716: 2018	Average gross heat of combustion for substantial components of non-homogenous products, Q _{PCS} (MJ/kg)	PCS ≤ 3,0 MJ/kg	-
	Average gross heat of combustion per unit area for any external non-substantial component of non-homogenous products, Q _{PCS} (MJ/m ²)	PCS ≤ 4,0 MJ/m ²	-
	For the product as a whole, (MJ/kg)	PCS ≤ 3,0 MJ/kg	-

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

5. Restrictions

At the time the standard EN 13501-1: 2018 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 report owner. The report owner 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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