

Reaction to fire classification report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Classification standard: EN 13501-1: 2018

Sponsor(s): Wallbarn Ltd

Product(s): "Zintek 200"

Report number: 544697

Version: 1

Quality management

Version	Date	Summary of amendments including reasons			
1	10 September 2024	Description	Initial issue		
			Prepared by	Reviewed by	Authorised by
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	Signature				
*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 "Zintek 200", 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 sponsor listed in Table 1.

Table 1 Sponsor details

Entity	Address
Sponsor	
Wallbarn Ltd	Unit 16 Capital Business Park, 22 Carlton Road, South Croydon, CR2 0BS, United Kingdom

2. Details of classified product

2.1 General

The product, "Zintek 200", is defined as being suitable for construction applications excluding flooring and linear pipe thermal insulation applications.

2.2 Product description

The product, "Zintek 200", is described in Table 2 and in the test reports listed in Section 3.1.

Table 2 Product description

Item	Detail	
General description	Coated steel sheet	
Product reference of overall composite	"Zintek 200"	
Name of manufacturer	MetalFloor (Steel manufacturer) Atotech (coating material manufacturer) AST (applicator)	
Overall thickness (coated steel)	1.55-1.62mm (stated by sponsor) 1.49mm (determined by Warringtonfire)	
Overall weight per unit area (coated steel)	11.33kg/m ² (stated by sponsor) 11.33kg/m ² (determined by Warringtonfire)	
Coating	Generic type	An inorganic, zinc rich corrosion protective base coating material made with zinc and aluminium flakes.
	Product reference	"Zintek 200"
	Name of manufacturer	Atotech
	Colour	Silver
	Number of layers	1
	Overall thickness	0.05-0.12mm
	Application rate	30g/m ²
	Specific gravity	See Note 1 below
	Application method	Spray
	Curing process	Oven cure 40 mins, at 220°C
Flame retardant details	See Note 2 below	

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Item		Detail
Steel	Generic type	Steel plate
	Product reference	"MetalPad EX "
	Name of manufacturer	MetalFloor
	Thickness	1.5mm
	Weight per unit area	11.7kg/m ²
	Flame retardant details	See Note 2 below
Brief description of manufacturing process		Steel coated with 'Zintec 200', an inorganic, zinc rich corrosion protective base coating material made with zinc and aluminium flakes.
Mounting and fixing details		The coated steel was tested over a 12mm thick calcium silicate substrate as defined in EN 13238:2010

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	Wallbarn Ltd	544691 (Issue 2)	14 June 2024	EN 13823: 2020 + A1: 2022
Warringtonfire	Wallbarn Ltd	544692 (Issue 2)	19 June 2024	EN ISO 1716: 2018 (*)

(*) 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 - s1, d0 can be found in Table 5.

Table 4 Test data

Test method Report number	Parameter	Number of tests	Results	
			Continuous parameters	Compliance with parameters
EN 13823: 2020 + A1: 2022 544691 (Issue 2)	FIGRA (THR(t) threshold of 0.2MJ)		0	-
	FIGRA (THR(t) threshold of 0.4MJ)		0	-
	THR _{600s} (MJ)		0.2	-
	LFS < edge of specimen		-	Compliant
	SMOGRA (m ² /s ²)		0	-
	TSP _{600s} (m ²)		5	-
	No flaming droplets/particles persisting shorter than 10 s in EN 13823 within 600s		-	Compliant
	No flaming droplets/particles persisting longer than 10 s in EN 13823 within 600s		-	Compliant
EN ISO 1716: 2018 544692 (Issue 2)	Average gross heat of combustion, Q _{PCS} (MJ/m ²) of external non-substantial component on non-homogeneous product Coating	3	0.3	-
EN ISO 1716: 2018 N/A	Average gross heat of combustion of substantial component, of non-homogeneous product, Q _{PCS} (MJ/kg) Steel	-	0.0	-
Product as a whole, Q _{PCS} (MJ/kg)			0.0	

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 "Zintek 200" in relation to its reaction to fire behavior is classified as:

A2

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 applications products is:

Fire behaviour	Smoke production			Flaming droplets		
A2	-	s	1	,	d	0

Alternatively shown:

Reaction to fire classification: A2 - s1, d0

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 5.

End use	Description	Origin
Substrate	Any substrate with a density equal to or greater than 652.5 kg/m ³ , a minimum thickness of 9 mm and a fire performance of A2-s1, d0 or better (excluding paper faced gypsum plasterboard).	As per EN 13238: 2010, clause 5.3 and EGOLF recommendation 045-2018.
Airgap	None allowed	N/A

This classification is valid for the following product parameters:

- Overall thickness: 1.55-1.62mm (no variation allowed)
- Overall weight per unit area: 11.33kg/m² (no variation allowed)
- Coating thickness: 0.05 – 0.12mm (no variation allowed)
- Coating application rate: 30g/m² (no variation allowed)
- Number of layers of coating: One (no variation allowed)
- Coating application method: Spray (no variation allowed)
- Coating curing process: Oven cure 40 mins, at 220°C (no variation allowed)
- Coating colour: Silver (no variation allowed)
- Steel thickness: 1.5mm (no variation allowed)
- Steel weight per unit area: 11.7kg/m² (no variation allowed)
- Use of flame retardants: No variation allowed
- Construction: No variation allowed
- Composition: No variation allowed

4.4 Fire performance parameters for A2 - s1, d0

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 5. The test results can be found in Section 3.2.

Table 5 Fire performance parameters for A2 - s1, d0

Test method	Parameter	Continuous parameters	Compliance with parameters
EN 13823: 2020 + A1: 2022	FIGRA (THR(t) threshold of 0.2MJ)	$FIGRA_{0,2MJ} \leq 120 \text{ W/s}$	-
	FIGRA (THR(t) threshold of 0.4MJ)	-	-
	THR _{600s} (MJ)	$THR_{600s} \leq 7,5 \text{ MJ}$	-
	Lateral flame spread to edge of test specimen?	-	LFS < edge of specimen
	SMOGRA (m ² /s ²)	$SMOGRA \leq 30 \text{ m}^2/\text{s}^2$	-
	TSP _{600s} (m ²)	$TSP_{600s} \leq 50 \text{ m}^2$	-
	Fall of flaming droplets/particles < 10s?	-	No flaming droplets/particles persisting shorter than 10 s in EN 13823 within 600s
	Fall of flaming droplets/particles > 10s?	-	No flaming droplets/particles persisting longer than 10 s in EN 13823 within 600s

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Test method	Parameter	Continuous parameters	Compliance with parameters
EN ISO 1716: 2018	Average gross heat of combustion for substantial components of non-homogenous products, Q_{PCS} (MJ/kg)	$PCS \leq 3,0$ 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)	$PCS \leq 4,0$ MJ/m ²	-
	For the product as a whole, (MJ/kg)	$PCS \leq 3,0$ 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 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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