Reaction to fire classification report No. 21249F

Owner of the classification report

MyDek Limited
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Introduction

This classification report defines the classification assigned to the product ***Delta20, Delta30, Innova*** in accordance with the procedures given in the standard EN 13501-1:2018: Fire classification of construction products and building elements - Part 1: classification using data from reaction to fire tests.

This classification report consists of 8 pages and may only be used or reproduced in its entirety

1. DETAILS OF CLASSIFIED PRODUCT

a) General

The products ***Delta20, Delta30, Innova*** are defined as coated aluminum decking products.
Its classification is valid for the following end use application(s):
Used as decking product in flooring applications.

b) Product description
This description is based on information given by the sponsor.

		Nominal values (1)	
General description		Aluminium decking board	
Product reference		"Delta30", "Delta 20", "Innova"	
Name of manufacturer		MyDek Ltd	
Overall thickness (coated aluminium decking)		Delta30: 30mm (1) Delta20, Innova: 20mm (1)	
Overall weight per unit area (coated aluminium decking)		Delta30: 14.0256 kg/m² (1) Delta20: 12.6356 kg/m^2 (1) Innova: 8.8256kg/m^2 (1)	
Profile diagram			
		Delta	Innova
Coating	Generic type	Polyester powder coating	
	Product reference	"Interpon D2525 (D2000 series)"	
	Name of manufacturer	Akzo Nobel	
	Colour reference	"RAL3004", "RAL 9005" & "RAL9010" as tested	
	Colour	Any Red, Black, White as tested	
	Application thickness	120 microns (1) (3)	
	Application rate	0.162-0.1872kg/m^2 (1) (varies with colour)	
	Specific gravity	1.35-1.56g/cm³ (1) (varies with colour)	
	Application method	Spray	
	Flame retardant details	None	
	Curing process	Heat (150 - 200°C)	
Aluminium decking board (Profile option 1)	Generic type	Aluminium	
	Product reference	"Delta30"	
	Name of manufacturer	MyDek Ltd.	
	Thickness (profile height)	30mm (1)	
	Thickness (face)	2.5mm (1)	
	Weight per unit area	13.86kg/m² (1)	
	Flame retardant details	None	

(1) Based on the information given by the sponsor
(3) Unverifiable by the laboratory

		Nominal values (1)
Aluminium decking board (Profile option 2)	Generic type	Aluminium
	Product reference	“Delta20”
	Name of manufacturer	MyDek Ltd.
	Thickness (profile height)	20mm (1)
	Thickness (face)	2.5mm (1)
	Weight per unit area	12.47kg/m² (1)
	Flame retardant details	None
Aluminium decking board (Profile option 3)	Generic type	Aluminium
	Product reference	“Innova”
	Name of manufacturer	MyDek Ltd.
	Thickness (profile height)	20mm (1)
	Thickness (face)	1.55mm (1)
	Weight per unit area	8.66kg/m² (1)
	Flame retardant details	None
Brief description of manufacturing process		Powder coating is based on polymer resin combined with pigments, curative, flow modifiers, levelling agents, and several other additives. All ingredients are melt-mixed together, then cooled and ground into a powder

(1) Based on the information given by the sponsor
(3) Unverifiable by the laboratory

More details (e.g. mounting and fixing) are available in the test report(s) in support of this classification (§2a).

2. TEST REPORTS AND EXAP REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

a) Test reports (and EXAP reports)

Name of the laboratory	Name of the sponsor	Test report ref. No. and test date	Test method and date
Warringtonfire, UK (NB 0833)	MyDek Limited	431262: 08/09/2020	EN ISO 1716:2018 (*)
WFRGENT nv Ghent, Belgium	MyDek Limited	21248H: 06/03/2023 21248I: 06/03/2023	EN ISO 1716:2018 (*)
WFRGENT nv Ghent, Belgium	MyDek Limited	21249A: 29/03/2022 & 30/03/2022 21249B: 29/03/2022 & 31/03/2022 21249C: 30/03/2022 21249D: 30/03/2022 21249E: 30/03/2022	EN ISO 9239-1:2010
WFRGENT nv Ghent, Belgium	MyDek Limited	21249G	EXAP according to CEN/TS 15117 (August 2005)

(*) 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).

b) Test results

Official test results used for the classification

Test method	Parameter	Number of tests	Results		Criteria for Class $A2_{FL}$-s1	
			Continuous parameters Mean	Compliance parameters	Continuous parameters	Compliance parameters
EN ISO 9239-1 (1)	Critical heat flux (kW/m²)	4	≥11	(-)	≥8,0	(-)
	Smoke production (%.min)		7	(-)	750	(-)
(1) Based on the results obtained in test report No. 21249B – Delta30, red colour						
EN ISO 1716	PCS (MJ/kg) (2)	0	0	(-)	≤3,0	(-)
	PCS (MJ/m²) (3)	3	3,5	(-)	≤4,0	(-)
	PCS (MJ/kg) (4)	0	0,4	(-)	≤3,0	(-)
(2) For homogeneous products and substantial components of non-homogeneous products – aluminium (not required to be tested) *(3) For any external non-substantial component of non-homogeneous products – Coating (worst case colour -black) Based on the results obtained in test report No. 21248H and the following calculation:* *21,7 MJ/kg x 0,162 kg/m² = 3,5 MJ/m²* *(4) For the product as a whole - Based on the following calculations:* *Coating: 21,7 MJ/kg x 0,162 kg/m² = 3,5 MJ/m²* *Aluminium: 0 MJ/kg x 8,66 kg/m² = 0 MJ/m²* ***PCS (Total product) =** 3,5 MJ/m²* ***PCS (Product as a whole) = 3,5 MJ/m² / 8,66 kg/m² = 0,4 MJ/kg*** *Note: Theoretical worst case PCS value will be determined by using the lowest mass per unit area of aluminium (8.66kg/m² as per the above calculation)*						

(-) Not applicable.

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Comparative test results used for the worst case determinations

EN ISO 9239-1 *Test report No. 21249A, 21249B, 21249C, 21249D, 21249E*	Critical flux (kW/m²)	Smoke attenuation (%.min)
Sample 1: 21249A Delta20 profile, red colour (lengthwise)	≥11	1
Sample 2: 21249A Delta20 profile, red colour (crosswise)	≥11	6
Sample 3: 21249B* Delta30 profile, red colour (crosswise)	≥11	20
Sample 4: 21249B* Delta30 profile, red colour (lengthwise)	≥11	14
Sample 5: 21249C Innova profile, red colour (lengthwise)	≥11	3
Sample 6: 21249C Innova profile, red colour (crosswise)	≥11	5
Sample 7: 21249D Delta30 profile, white colour (lengthwise)	≥11	3
Sample 8: 21249E Delta30 profile, black colour (lengthwise)	≥11	31

(*) The results of this sample were re-used in the official test report No. 21249B (as samples 1 & 2).

EN ISO 1716 *Test report No. 431262, 21248I, 21248H*	PCS (MJ/kg)	Used amount (kg/m²)	PCS (MJ/m²) in relation to the product as a whole
White colour coating - 431262	17,5	0.1872	3,3
Red colour coating – 21248I	20,8	0.1656	3,4
Black colour coating – 21248H	21,6	0.162	3,5

(*) The results of these sample were re-used in the official test report Nos. 21248I & 21248H (as sample 1).

3. CLASSIFICATION AND FIELD OF APPLICATION

a) Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018.

b) Classification

The product ***Delta20, Delta30, Innova*** in relation to its reaction to fire behavior is classified as:

Fire behavior	Smoke production
$A2_{FL}$	**s1**

c) Field of application

This classification for the product as described in §1b, is valid for the following end use applications:

- Substrate: Calcium silicate substrate referenced "Promat Supalux" having a thickness of 9mm and a density of 950kg/m^3
- Airspace: 0mm - Product applied in direct contact with the substrate
- Fixing: Mechanically fixed
- Joints: Joints permitted

This classification is valid for the following product parameters:

- Coating colour: All colours with PCS ≤3,5MJ/m^2
- Coating reference: Interpon D2525 (D2000 Series)
- Nominal coating thickness : 120 microns
- Nominal coating application rate: 0.162-0.1872kg/m^2 (varies only with s.g. of colour)
- Specific gravity: 1.35-1.56g/cm^3 (varies only with colour as described)
- Permitted aluminum profiles: Delta20, Delta30, Innova
- Nominal profile height (aluminium): 30mm (Delta30), 20mm (Delta20 & Innnova)
- Nominal aluminium thickness (face): 2.5mm (Delta20 & Delta30), 1.5mm (Innova)
- Nominal aluminium profile weight per unit area: 13.866kg/m^2 (Delta30), 12.47kg/m^2 (Delta20), 8.66kg/m^2 (Innova)
- Use of flame retardants: None
- Product composition: No variation allowed
- Product construction: No variation allowed

4. RESTRICTIONS

At the time the standard EN 13501-1:2018 was published, no decision was made concerning the duration of validity of a classification report.

Provisions of Regulation (EU) 305/2011, commonly known as the Construction Products Regulation (CPR), prevail over any conflicting provisions in the harmonized standards and technical specifications.

5. WARNING

This classification report does not represent type approval or certification of the product.

According to the information mentioned by the sponsor on the technical information sheet there was no product standard for CE 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 CE marking.

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