iBMB MPA TU BRAUNSCHWEIG
Institut für Baustoffe, Massivbau und Brandschutz | Materialprüfanstalt für das Bauwesen

Test report

Document number:	(2300/679/16-b) – Rhr of 18/01/2016
Client:	SISTEM METAL Yapi Reklam Malzemeleri Insaat San ve Tic. A.S Istiklal Mh. Atatürk Cad. 19 Mayis Is Mrk. No.: 1 34522 KIRAÇ - Esenyurt / ISTANBUL
Order date:	03/01/2016
Content of the order:	Performance of tests to classify fire behaviour according to DIN EN 13501-1:2010-01; Determination of calorific value
Test subject:	Aluminium composite panel; product designation: "ALBOND"
Basis of the test:	DIN EN ISO 1716:2010-11
Sampling:	by product manufacturer
Test material received:	07/03/2016
Please note:	The test results relate only to the behaviour of the samples of a construction product under the specific test conditions; they are not to be taken as the sole criterion for assessing the potential fire hazard of the construction product in its application scenario.

This test report consists of 4 pages, including the cover sheet.

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Notified body (0761-CPR) – Recognised and notified by the German building authorities for testing, monitoring, inspection and certification.

1 Introduction

This test report describes the test to determine the calorific value and the results according to DIN EN ISO 1716:2010-11 for the construction products listed below.

2 Product description and product data

Product name: "ALBOND"

The construction product is an aluminium composite panel for cladding on curtain walls.

Material data determined by the testing laboratory:

Layer	Type	Thickness	Weight per unit area [kg/m²]	Application quantity [g/m²]
Top coat (V)	PVDF	20 µm	--	90*
Primer	PVDF	5 µm	--	60*
Metal layer	Aluminium	0.5 mm	1.26	--
Adhesive layer	Polyethylene	80 µm	--	77
Core material	Inorganic	3.0 mm	5.39	--
Adhesive layer	Polyethylene	80 µm	--	77
Metal layer	Aluminium	0.5 mm	1.26	--
Primer	PVDF	5 µm	--	60*
Top coat (R)	PVDF	4 µm	--	50*

* Information provided by the manufacturer

3 Sampling and samplepreparation

Sampling was performed in accordance with DIN EN ISO 1716:2010-11, section 7.2, and sample preparation in accordance with DIN EN ISO 1716:2010-11, section 7.4.

4 Conditioning

Conditioning was performed in accordance with DIN EN 13238:2010-06.

5 Test procedure

The following test apparatus and decomposition vessel (bomb) were used to determine the PCS value:

Device name	Manufacturer	Water equivalent E	Calibration date
Calorimeter C 5000	IKA Werke GMBH & Co. KG	Decomposition vessel 1: 0.0081564 MJ/K Decomposition vessel 2: 0.0081524 MJ/K	14/06/2016

The test was performed in accordance with DIN EN ISO 1716:2010-11, sections 7.9 and 8.3.

Product/component	Test date	Number of test series
Top coat (F)	15/06/2016	3
Primer	15/06/2016	3
Adhesive layer	12/07/2016	3
Core material	15/06/2016	3
Top coat (R)	15/06/2016	3

6 Test results according to DIN EN ISO 1716:2010-11

Evaluation was performed in accordance with DIN EN ISO 1716:2010, section 9.4.3.

Component	PCS sample 1 [MJ/kg]	PCS sample 2 [MJ/kg]	PCS sample 3 [MJ/kg]	PCS mean value [MJ/kg]	PCS [MJ/m²]
Top coat (V)	20.11	20.09	19.88	20.03	1.80
Primer	18.75	18.74	18.83	18.77	1.13
Metal layer	--	--	--	--	--
Adhesive layer	44.43	44.37	44.6	44.47	3.42
Core material	1.92	1.78	1.79	1.83	9.61
Adhesive layer	44.43	44.37	44.6	44.47	3.42
Metal layer	--	--	--	--	--
Primer	18.75	18.74	18.83	18.77	1.13
Top coat (R)	14.40	15.10	15.76	15.09	0.75
PCS_{total} value for aluminium composite panel "ALBOND"				2.69	21.52

7 Please note

7.1 The test results in section 6 are valid only for the construction product as per the sample configuration specified in section 2. Deviations from the sample configuration or in the composition of the test specimen may have a negative impact on the fire behaviour to such an extent that the test result is no longer valid. In such cases, the fire behaviour must be verified separately.

7.2 This test report does not replace any technical certificates that may be necessary under German construction law (state building codes).

This document is the translated version of test report no. 2300/679/16-b) – Rhr – dated 18/01/2016. The legally binding text is the aforementioned German test report.

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