

Test Report

- Translation -

Document No.: (3680/881/13) – Sta of 23/06/2015

Client: Dr. Lietz Marketing Services GmbH
Wackenbergr. 65 - 75
13156 Berlin

Order date: 27.04.2015

Specimen: Insulation board

Product name: „Marmox Board 50“

Subject: Test for reaction-to-fire classification in accordance with EN 13501-1 : 2010-02: Reaction to fire tests – Ignitability of products subjected to direct impingement of flame – Single-flame source test

Test basis: DIN EN ISO 11925-2 : 2011-02

Test material received: 27/04/2015

Sampling: Made by client

Note: The test results only relate to the behaviour of the samples of a construction product under the specific conditions prevailing during the test; they shall not be assumed to be the only criteria for assessing the potential fire hazard the construction product represents under real conditions. This Test Report does not replace an attestation that may be required under federal state building code/building law regulations (MBO § 17, Sec. 3).

This Test Report consists of 5 pages, including the cover sheet and 2 Annexes.

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1 General

This Test Report describes the tests, and the results achieved in these tests, that have been performed with the product described below on the basis of the method specified in DIN EN 11925-2 : 2011-02.

2 Test material und material data

The tested product with the product name „Marmox Board 50“ is a grey board that consists of extruded polystyrene core, which is covered on both sides with a cement-mortar coat and glass fibre mesh.

The product is used for inside insulation**.

Product with components	Thickness [mm]*	Weight per unit area [kg/m ²]*	Density [kg/m ³]	Colour
Marmox Board 50**	48,7 – 49,3 Average: 49,0 ¹⁾	6,2	--	grey
Cover layer	Average: 1,4	--	--	
Core	Average: 46,8	--	34,4	

* determined by measurements performed by the Testing Laboratory / **Details made by client

¹⁾ The mean value was calculated from 6 measured values

The company BioLab Umweltanalysen GmbH carried out a coloumetric determination after combustion at 1000° C, analog to DIN EN ISO 9562 : 2005-02 and following halogen components were detected:

Componens	Halogen (chlorine, fluorine, bromine related as chlorine) [Weight-% /kg TS]
XPS-Core	0,0057
Fabric	0,0069
Mineral layer	0,0125

The complete analysis report 120535 of 16/06/2015 of the BioLab Umweltanalysen GmbH company can be found in appendix 1-2.

3 Preparation of the specimens

The test material was delivered to the Testing Laboratory in the form of samples with the dimensions of width x length = 250 mm x 90 mm.

4 Conditioning

The specimens and the filter paper were stored with a defined duration in accordance to DIN EN 13238 : 2010, section 4.3 at the temperature of $(23\text{ °C} \pm 2)\text{ °C}$ and a relative air moisture of $(50\% \pm 5\%)$.

5 Test procedure

At the tests in the burning cabinet both procedures, flames applied to the surface in accordance with DIN EN ISO 11925-2 : 2011-02, section 7.3.3.1 and flames applied to the edge in accordance with section 7.3.3.2.2 and 7.3.3.2.3 were conducted..

The tests were performed on 13/05/2015.

The flame exposure lasted for 15 seconds each, followed by an observation period of another 5 seconds.

The material was tested freely suspended and with additional substrate. As the substrate a fibre cement board (ISO 390) in according to DIN EN 13283:2010-06 was used.

6 Test results in accordance with DIN EN ISO 11925-2

6.1 Test results for „Marmox Board 50“ (tested with fibre cement board)

6.1.1 Surface exposure in accordance with DIN EN ISO 11925-2, section 7.3.3.1.

Sample	The material ignited after	Max. height of flame tip Test period: (15s + 5s)	Measuring mark reached after	Flame extinguished itself after	Flame was extinguished after	Afterglow stopped after	Brennendes Abtropfen nach	Ignition of filter paper	Smoke production
	[s]	[mm]	[s]	[s]	[s]	[s]	[s]		
1	--	30	--	15	--	--	--	no	very low
2	--	30	--	15	--	--	--	no	very low
3	--	30	--	15	--	--	--	no	very low
4	--	30	--	15	--	--	--	no	very low
5	--	30	--	15	--	--	--	no	very low
6	--	30	--	15	--	--	--	no	very low

Times specified in seconds after start of test / observation: --

6.1.2 Edge exposure in accordance with DIN EN ISO 11925-2, section 7.3.3.2.2

Sample	The material ignited after	Max. height of flame tip Test period: (15s + 5s)	Measuring mark reached after	Flame extinguished itself after	Flame was extinguished after	Afterglow stopped after	Brennendes Abtropfen nach	Ignition of filter paper	Smoke production
	[s]	[mm]	[s]	[s]	[s]	[s]	[s]		
1	1	30	--	15	--	--	--	no	very low
2	1	30	--	15	--	--	--	no	very low
3	1	30	--	15	--	--	--	no	very low
4	1	20	--	15	--	--	--	no	very low
5	1	30	--	15	--	--	--	no	very low
6	1	30	--	15	--	--	--	no	very low

Times specified in seconds after start of test / observation: --

6.1.3 Edge exposure (90° rotation) in accordance with DIN EN ISO 11925-2, section 7.3.3.2.3

Sample	The material ignited after	Max. height of flame tip Test period: (15s + 5s)	Measuring mark reached after	Flame extinguished itself after	Flame was extinguished after	Afterglow stopped after	Brennendes Abtropfen nach	Ignition of filter paper	Smoke production
	[s]	[mm]	[s]	[s]	[s]	[s]	[s]		
1	1	100	--	--	30	--	--	no	moderate
2	1	60	--	14	--	--	--	no	moderate
3	1	80	--	15	--	--	--	no	moderate
4	1	90	--	--	30	--	--	no	moderate
5	1	120	--	--	30	--	--	no	moderate
6	1	100	--	--	30	--	--	no	moderate

Times specified in seconds after start of test / observation: --

6.2 Test results for „Marmox Board 50“ (freely suspended state)

6.2.1 Edge exposure in accordance with DIN EN ISO 11925-2, section 7.3.3.2.2

Sample	The material ignited after	Max. height of flame tip Test period: (15s + 5s)	Measuring mark reached after	Flame extinguished itself after	Flame was extinguished after	Afterglow stopped after	Brennendes Abtropfen nach	Ignition of filter paper	Smoke production
	[s]	[mm]	[s]	[s]	[s]	[s]	[s]		
1	1	20	--	15	--	--	--	no	very low
2	1	30	--	15	--	--	--	no	very low
3	1	30	--	15	--	--	--	no	very low
4	1	20	--	15	--	--	--	no	very low
5	1	30	--	15	--	--	--	no	very low
6	1	20	--	15	--	--	--	no	very low

Times specified in seconds after start of test / observation: --

6.2.2 Edge exposure (90° rotation) in accordance with DIN EN ISO 11925-2, section 7.3.3.2.3

Sample	The material ignited after	Max. height of flame tip Test period: (15s + 5s)	Measuring mark reached after	Flame extinguished itself after	Flame was extinguished after	Afterglow stopped after	Brennendes Abtropfen nach	Ignition of filter paper	Smoke production
	[s]	[mm]	[s]	[s]	[s]	[s]	[s]		
1	1	120	--	--	30	--	--	no	moderate
2	1	130	--	--	30	--	--	no	moderate
3	1	120	--	--	30	--	--	no	moderate
4	1	100	--	--	30	--	--	no	moderate
5	1	120	--	--	30	--	--	no	moderate
6	1	100	--	--	30	--	--	no	moderate

Times specified in seconds after start of test / observation: --

7 Special notes

The test results in section 6 above only apply to the product mentioned in section 2, provided the material specifications are as described in section 2. If the product is made from other component percentages as in the test or with thicknesses or densities, the reaction to a fire may be adversely affected so that the results achieved in the test will no longer apply. The reaction to fire must in these cases be demonstrated separately.

This document is the translated version of Test Report (3680/881/13) – Sta dated 23/06/2015. The legally binding text is the aforementioned German Test Report.

ORR. Dr.-Ing. G. Blume
Head of Testing Laboratory

i.A.
N. Stachowski B. Sc.
Official in charge



Biolab Umweltanalysen GmbH · Ernst-Böhme-Straße 30 · 38112 Braunschweig

Dr. Lietz Marketing Services
Hr. Dr. Lietz
Wackenbergr. 65-75

13156 BERLIN

Ernst-Böhme-Straße 30
D-38112 Braunschweig
Telefon 05 31-31 30 00
Telefax 05 31-31 30 40
E-Mail info@biolab.de

Braunschweigische Landessparkasse
IBAN: DE75 2505 0000 0001 7430 95
BIC: NOLADE2HXXX

Deutsche Bank Braunschweig
IBAN: DE85 2707 0030 0100 0900 00
BIC: DEUTDE2H270

Geschäftsführer:
Dipl.- Chemiker
Martin Mueller von der Haegen

Amtsgericht Braunschweig
HRB 3263

Braunschweig, 16. Juni 2015

Analysenbericht 120535 Seite 1 von 2
Kontrollzahl : 150616-142215-32762

Ihr Projekt : Halogenbestimmung in einer Bauplatte mit XPS-Kern

Sehr geehrte Damen und Herren,

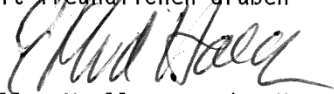
beiliegend übersenden wir Ihnen die Analysenergebnisse der Laboruntersuchungen an Ihren Proben. Das o.g. Projekt wurde am 1. Juni 2015 durch unser Labor in Bearbeitung genommen.

Sofern mit dem Auftraggeber nicht anders vereinbart, werden die evtl. in diesem Projekt untersuchten Wasserproben nach dem 30. Juni 2015 aus unserem Kühlraum entfernt; evtl. in diesem Projekt untersuchte Bodenproben werden nach dem 27. Juli 2015 verworfen. Sollten Sie eine längere Aufbewahrungszeit wünschen, benachrichtigen Sie uns bitte.

Die Analysen wurden gemäß dem "Qualitätssicherungshandbuch der BIOLAB Umweltanalysen GmbH" ausgeführt. Die mit "Q" gekennzeichneten Analysen sind nach DIN EN ISO/IEC 17025 akkreditiert. Mit "E" gekennzeichnete Analysen wurden durch ein externes Partnerlabor ausgeführt. Die Untersuchungsergebnisse beziehen sich ausschließlich auf die genannten Prüfgegenstände. Dieser Prüfbericht darf nur nach Absprache mit dem Prüflabor auszugsweise wiedergegeben werden. Eine vollständige Wiedergabe bedarf keiner Genehmigung.

Sollten Sie weitere Fragen an uns haben, stehen wir Ihnen gern zur Verfügung.

Mit freundlichen Grüßen


Ellen Mueller von der Haegen
Auftragsmanagerin



Analysenbericht : 120535
Seite : 2 von 2
Auftraggeber : Dr. Lietz Marketing Services
Projekt : Halogenbestimmung in einer Bauplatte mit XPS-Kern
Probenahme : Auftraggeber
Probeneingang : 1. Juni 2015
Analysenabschluß : 16. Juni 2015
Kontrollzahl : 150616-142215-32762

Probennummer	Beschreibung	Bezeichnung
1. : 991163010	/ Divers	/ XPS-Kern
2. : 991163513	/ Divers	/ Gewebe
3. : 991163514	/ Divers	/ Mineralische Schicht

1. 2. 3.

Coloumetrische Bestimmung nach Verbrennung bei 1000°C
analog DIN EN ISO 9562 2.05 ohne Entfernung von anorganischem Halogen

Halogene	(Gew-%/kg Ts)	1.	2.	3.
(Chlor, Fluor, Brom berichtet als Chlor)		0,0057	0,0069	0,0125