

Exova Warringtonfire, Frankfurt
Industriepark Höchst, C369
Frankfurt am Main
D-65926
Germany

T : +49 (0) 69 305 3476
F : +49 (0) 69 305 17071
E : EBH@exova.com
W: www.exova.com



Testing. Advising. Assuring.

Classification report

No. 2017-1965-K1-1

issued 06.11.2017

Customer: TRIPLE LITE INCORPORATED
2F, NO. 78 FENLIAO RD. SECTION 1
LINKOU DISTRICT, NEW TAIPEI CITY
TAIWAN, R.O.C.

Order: Classification of the burning behaviour according to
DIN EN 13501-1 (2010-01)

Date of order: 29.09.2017

Notification number of the test laboratory

NB 1378

Designation of the classified building product

TRILITE RMS – REINFORCE MAGNESIUM SILICATE BOARD
(Magnesium Oxide- Sulphate Based)

This classification report lays down the classification of the building product above according to the procedures of DIN EN 13501-1.

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This classification report is a translation of the German version 2017-1965-K1 (issued 06.11.2017). In case of doubt only the German version is valid.
This classification report contains 5 pages.

1. Description of the sample material

1.1 Details of the customer:

Product name: TRILITE RMS – REINFORCE MAGNESIUM SILICATE BOARD
(Magnesium Oxide- Sulphate Based)

Product description TRILITE RMS – REINFORCE MAGNESIUM SILICATE BOARD (Magnesium Oxide- Sulphate Based) with off-white color appearance is produce from a core mixture of inert mineral ore based raw materials mainly: MgO powder, $MgSO_4$ powder, perlite, wood fibre, other fillers and embedded with layers of glassfibre mesh and non-woven cloth on both sides.

Boards standard thickness produce are 3 mm to 20 mm

Boards Density: 1100 kg/m³ (tolerance \pm 12 %)

The material is formed by 5 layers, a surface layer (non-woven fabric), then the glassfibre mesh (those two would be the none substantial components), then the core raw material mixture (substantial component) and on the other face the same described finish (surface layer and glassfibre mesh)

Intended end use: TRILITE RMS boards are intended for use in internal and external construction applications, such as internal and external wall, ceiling, fascia, pre-fabricated homes, decorative substrate, door productions, backerboard, flooring, partitions, linings, eaves, soffits, furnitures, countertops, fire rated applications

1.2 At the specimen preparation from the Exova Warringtonfire determined values:

Non combustible test according to DIN EN ISO 1182:

Sample of TRILITE RMS – REINFORCE MAGNESIUM SILICATE BOARD

- Colour: white
- Thickness: 10-20 mm
- Surface weight: i.a. 19,93 kg/m² (in 20mm material thickness)
- Density: i.a. 996,5 kg/m³

The samples are air-conditioned according to DIN 13823 up to constant weight with standard air

The samples of the furnace test were then dried at 60 °c for 24 hours in the drying cabinet and stored in the Desiccator until testing.

The samples consisted of 2 discs each with a thickness of approx. 20 mm and a disc with a thickness of 10 mm, with a diameter of approx. 45 mm.

Calorific value according to DIN EN ISO 1716:

From the customer delivered material specimen of glasfiber mesh cloth, non woven cloth and magnesium core mixture.

Material	Colour	Thickness [mm]	Surface weight [kg/m ²]
glasfiber mesh cloth	weiß	0,28	0,151
non woven cloth	weiß	0,26	0,058
magnesium core mixture	weiß	10	19,721

The samples of the calorific value determination made after the air conditioning by crushing.

2. Test reports and test results

2.1 Test reports

Name of test laboratory	Customer	Report to form the basis	Test procedure
Exova Warringtonfire, Frankfurt	TRIPLE LITE INCORPORATED	2017-1965	DIN EN ISO 1716 (Determination of gross heat combustion) DIN EN ISO 1182 (non combustible test)

2.2 Test results

Test procedures	Parameter / classes		Test results
			average
DIN EN ISO 1716	PCS \leq 3,0 MJ/kg ^a für Klasse A2 PCS \leq 4,0 MJ/m ^{2b} für Klasse A2 PCS \leq 4,0 MJ/m ^{2d} für Klasse A2 PCS \leq 3,0 MJ/kg ^e für Klasse A2	glasfiber mesh cloth: 0,0000 MJ/Kg not substantially) 0,0000 MJ/m ² non woven cloth: 4,3932 MJ/Kg (not substantially) 0,2548 MJ/m ² magnesium core mixture: 0,0000 MJ/kg (substantially)	Total heat of combustion: 0,127 MJ/kg
DIN EN ISO 1182	Furnace temperature rise $\Delta T \leq 30^\circ\text{C}$ for class A1		1,66 °C
	Massen loss $\Delta m \leq 50\%$ for class A1		39,36 %
	Sustained flaming $t_f \leq 0$ s (that means no sustained flaming) for class A1		0 s

Explanations of table standing too above:

PCs: Gross verbrennungswärme (calorific value)

a: For homogeneous construction products and substantial components of non-homogeneous construction products.

b: For any external non-substantial component of non-homogeneous construction products.

c: Alternatively, an external non-substantial component may have a PC \leq 2.0 MJ/m², provided the product complies with the following Katers according to En 13823: FIGRA \leq 20 w/s and LFS < rand of the specimen body and THR600s \leq 4.0 MJ and S1 and do.

d: For every inner non-substantial component of non-homogeneous construction products.

e: For the product as a whole.

3 Classification and range of application

3.1 Reference

The classification was carried out according to the chapter 11 of DIN EN 13501-1

3.2 Classification

The tested material is ranked related to its non combustible behaviour and to its heat combustion into the class A1 / A1_{fl}

The classification of the tested material reads thus:

A1 / A1_{fl}

3.3 Area of application

The classification is only valid for the in chapter one described building product.

4 Reservation

This classification report replaces not a possible required type admittance or type certification of the product.

This classification report replaces the classification report 2017-1965-K1 issued 06.11.2017 (date of signature), which is invalid from now on.

Frankfurt, the 16.11.2017



P. Scheinkönig / A. Garcia
Tester in charge



i.V. M. Ronzheimer
Dipl.-Ing. T. Zachäus
Head of the test laboratory