Materialprüfanstalt für das Bauwesen

MPA BAU HANNOVER

Reaction to fire classification report no. 062732.1 - Re

Reaction to fire classification report of faced mineral wool products
„ASTROTHERM AVS“
produced in the plant Diekirch, Luxembourg

sponsor: ASTRON BUILDINGS S.A.
Route d'Ettelbruck

L - 9202 Diekirch

order from: 29.06.2006 – A. Collignon

This classification report defines the classification assigned to the building product
„ASTROTHERM AVS“
in accordance with the procedures given in EN 13501-1.

Materialprüfanstalt für das Bauwesen Hannover MPA BAU HANNOVER

This reaction to fire classification report consists of 4 pages and may only be used or reproduced in its entirety.

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1. Details of classified products

1.1 Nature and end use application

The product „ASTROTHERM AVS" is a mineral wool mat faced with a compound aluminium foil and is defined as being suitable for wall or ceiling applications.

1.2 Description

The product „ASTROTHERM AVS" is fully described in the test reports provided in support of the classification listed in clause 2.1.

According to the owner of this classification report, this product complies with the following European product specification:

EN 13162: 2001-10 - Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification

2. Test reports and test results in support of this classification

2.1 Test reports

Name of laboratory	Name of sponsor	Test report no.	Test method
MPA BAU HANNOVER	Astron Buildings S.A.	030304 - Dra	EN 13823: 2002-02
MPA BAU HANNOVER	Astron Buildings S.A.	061675 - Dra	EN 13823: 2002-02
MPA BAU HANNOVER	Astron Buildings S.A.	030958 - Re	EN ISO 1182: 2002-02
MPA BAU HANNOVER	Astron Buildings S.A.	030128 - Re	EN ISO 1716: 2002-02
MPA BAU HANNOVER	Astron Buildings S.A.	030134 - Re	EN ISO 1716: 2002-02
MPA BAU HANNOVER	Astron Buildings S.A.	030160 - Re	EN ISO 1716: 2002-02

2.2 Gross heat of combustion – PCS values

2.2.1 PCS values of aluminium compound foil

Product components	Weight per unit area	Gross heat of combustion PCS	
	g/m^2	MJ/kg	MJ/m^2
painting	3,5	8,32	0,03
aluminium foil	54,0	-	-
glass fabrics RG 2/2	16,3	2,35	0,04
PE-foil	7,5	43,19	0,32
PVC-foil	39,0	23,09	0,90
compound foil „AVS"	120,3	10,75	1,29

2.2.2 Gross heat of combustion – PCS values of „ASTROTHERM AVS“

Product/Component	Weight per unit area	Gross heat of combustion PCS	
	g/m^2	MJ/kg	MJ/m^2
compound foil „AVS“	120,3	10,75	1,29
glue „48267“	35	9,04	0,32
mineral wool (40 mm)	685	1,44	0,99
mineral wool (50 mm)	820	1,44	1,18
mineral wool (120 mm)	1925	1,44	2,78
product (40 mm)	840	3,10	2,60
product (50 mm)	975	2,86	2,79
product (120 mm)	2080	2,11	4,39

2.3 Test results of „ASTROTHERM AVS“

			Results	
Test method	**Parameter**	**Number of tests**	**Continuous parameter**	**Compliance parameter**
EN ISO 1182	ΔT (°C)	5	5,3	-
	Δm (%)	5	5,5	-
	t_f (s)	5	0	-
EN ISO 1716	PCS (MJ/kg)			
	- mineral wool (1)	3	1,44	-
	- product (4)	-	2,86	-
	PCS (MJ/m^2)			
	- facing (2)	3	1,61	-
EN 13823	$FIGRA_{0,2\ MJ}$	3	7	-
	$FIGRA_{0,4\ MJ}$	3	7	-
	LFS < edge	3	-	Y
	THR_{600s} (MJ)	3	1,1	-
	$SMOGRA(m^2/s^2)$	3	2	-
	$TSP_{600\ s}$ (m^2)	3	46	-
	Flaming droplets / particles	3	-	N

(1) substantial component of a non-homogeneous product
(2) external non-substantial component of a non-homogeneous product
(4) product as a whole

3. Classification and direct field of application

3.1 Reference

This classification has been carried out in accordance with clauses 10.7.1, 10.7.3 and 12.1 of EN 13501-1: 2002-06.

3.2 Classification

The product „ASTROTHERM AVS" in relation to its reaction to fire behaviour is classified: **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 products is:

Fire behaviour	Smoke production		Flaming droplets/particles	
A2	s	1	d	0

i.e. **A2 – s1, d0**

3.3 Field of application

This classification is valid for the following end use conditions:

- For mechanical fixings
- For metallic substrates with a melting point ≥ 1000 °C

This classification is also valid for the following product parameters:

- nominal thickness of the products: 50 mm - 120 mm
- nominal density of the mineral wool: ≤ 16 kg/m^3

4. Limitations

4.1 Warning

This document does not represent type approval or certification of the products.

Hannover, 28.09.2006

Head of fire laboratory

(ORR Dipl.-Ing. Restorff)

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