

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com



Testing. Advising. Assuring.

Title:

CLASSIFICATION OF
REACTION TO FIRE
PERFORMANCE
IN ACCORDANCE WITH
EN 13501-1:2007+A1:2009

Notified Body No:

0833

Product Name:

"KS 1000RW"

Report No:

317469

Issue No:

3

Prepared for:

Kingspan Ltd
Greenfields Business Park No
2, Greenfields
Holywell, CH8 7GJ
Flintshire

Date:

2 April 2012

1. Introduction

This classification report defines the classification assigned to "KS 1000RW", a Self-supporting double skin metal faced insulating panel as defined in EN 14509, in accordance with the procedures given in EN 13501-1:2007+A1: 2009

2. Details of classified product

2.1 General

The product, "KS 1000RW", a Self-supporting double skin metal faced insulating panel as defined in EN 14509 is defined as suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "KS 1000RW", a Self-supporting double skin metal faced insulating panel as defined in EN 14509, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		A coated profiled steel faced foam Insulation panel
Product reference of system		"KS 1000RW"
Overall product thickness		40 and 100mm (stated by sponsor)
The maximum and minimum values include a 1mm internal profile and a 4mm external profile		104mm - Maximum taken at high profiles 98.75mm - Minimum taken at low profiles The above values were determined by Exova Warringtonfire
Overall weight per unit area of composite		9.90 and 12.3kg/m ² (stated by sponsor) 9.05 and 12.24kg/m ² (determined by Exova Warringtonfire)
Product configuration		<ul style="list-style-type: none"> • Coating (Test face) • Profiled steel • Insulation • Profiled steel • Coating (Reverse face)
Coating System	Product reference	"Bright White Liner"
	Name of manufacturer	Tata
	Overall application thickness	15 microns ± 10%
	Generic type	Polyester
Colour		"White"
Profiled steel sheet	Product reference	"Bright White Liner"
	Generic type	Galvalloy 100g/m ² S220
	Name of manufacturer	Kingspan Ltd
	Thickness	0.32mm ±10%
	Profile reference	"EB (Equi Bead)"
Bonding method (steel to insulation)		Auto adhesively bonded during the manufacturing process

Insulation	Product reference	"Ecosafe"
	Generic type	HCFC free polyisocyanurate foam
	Name of manufacturer	Kingspan Ltd
	Thickness	40 and 100mm
	Density	38kg/m ³ ±10%
	Flame retardant details	See Note 2
Coating System	Product reference	"External Weather Sheet"
	Name of manufacturer	Arcelor
	Overall application thickness	55 microns ± 10%
	Generic type	See Note 1
	Colour	"Met Silver (Metallic)"
Profiled steel sheet	Product reference	"External Weather Sheet"
	Generic type	Galfan ZA265 S220
	Name of manufacturer	Kingspan Ltd
	Thickness	0.465mm ±10%
	Profile reference	"RW (Trapezoidal)"
Mounting and fixing details		A 40mm ventilated cavity was situated between the reverse face of the specimens and the calcium silicate backing board
Brief description of manufacturing process of panel		See Note 2

Note 1. The sponsor was unable to provide this information.

Note 2. The sponsor was unwilling to provide this information.

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports Nos.	Test method
Exova Warringtonfire	Kingspan Limited	314022 Issue 2 316771	EN 13823
Exova Warringtonfire	Kingspan Limited	314024 316772 Issue 2	EN ISO 11925-2

3.2 Test results (worst classification results from formal tests are given in the table)

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN 13823	Figra _{0.2 MJ} (W/s)	3	36.1	Compliant
	THR _{600 s} (MJ)		1.38	Compliant
	Smogra (m ² /s ²)		1.4	Compliant
	TSP _{600 s} (m ²)		48.5	Compliant
	LFS (y/n)		N	Compliant
	Flaming droplets (y/n) <10 s (y/n) >10 s (y/n)		N	Compliant
EN ISO 11925-2 30 s surface exposure	Flame spread (mm)	6	Nil	Compliant
	Flaming droplets (y/n)		N	Compliant
30 s edge exposure	Flame spread (mm)	6	10	Compliant
	Flaming droplets (y/n)		N	Compliant
30 s core exposure	Flame spread (mm)	6	70	Compliant
	Flaming droplets (y/n)		N	Compliant

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2007+A1:2009

4.2 Classification

The product, "KS 1000RW", a Self-supporting double skin metal faced insulating panel as defined in EN 14509, in relation to its reaction to fire behaviour is classified:

Reaction to fire classification: B-s1, d0

4.3 Field of application

This classification is valid for the following end use applications, as defined in connection with EN 14509:2006:

- i) Wall and ceiling applications
- ii) Free standing

This classification is also valid for the following product parameters:

Product thickness	34 mm and above
Facing thickness	0.32 mm up to 0.93 mm
Facing colour	any colour
Profile geometry	any profile up to 5 mm
Core density	± 15% of tested density
core composition	No variation allowed

The classification is only valid for exposure to the tested face (Bright White Liner)

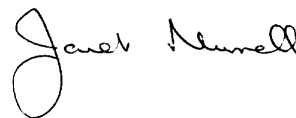
SIGNED



.....

Frans Paap
Certification Engineer

APPROVED



.....

Janet Murrell
Technical Manager
on behalf of **Exova Warringtonfire**

Issue 3: 5th April 2012

This copy has been produced from a .pdf format electronic file that has been provided by Exova Warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Exova Warringtonfire. The original signed paper version of this report is the sole authentic version. Only the original paper versions of this report bear authentic signatures of the responsible Exova Warringtonfire staff.