

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:

"Industrial Agro-Alimentaire
(IND)"

Report No:

WF 378653

Issue No:

2

Prepared for:

Kingspan Limited,
Dublin Rd,
Kingscourt,
County Cavan,
Ireland

Date:

3rd February 2017



0249

1. Introduction

This classification report defines the classification assigned to "Industrial Agro-Alimentaire (IND)", a family of coated profiled steel faced insulation panels, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Industrial Agro-Alimentaire (IND)", a family of coated profiled steel faced insulation panels, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Industrial Agro-Alimentaire (IND)", a family of coated profiled steel faced insulation panels, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		A family of coated profiled steel faced foam insulation panels	
Product reference of system		"Industrial Agro-Alimentaire (IND)"	
Overall product thickness		50mm and above	
Overall weight per unit area of composite		11.71kg/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	Arcelor Mittal	
	Overall application thickness	0.465mm to 0.930mm ± 10%	
	Colour	Any colour	
	Top coat (Test face)	Product reference	"Bright White Liner"
		Generic type	Polyester
		Name of manufacturer	Arcelor Mittal
		Colour	"White"
		Number of coats	One
		Application thickness	15 microns
		Application method	Roller
		Curing process	Oven
	Flame retardant details	See note 1 below	
	Backing coat	Product reference	See note 1 below
		Generic type	
Name of manufacturer			
Colour			
Number of coats			
Application thickness			
Application method			
Curing process			
Flame retardant details			

Continued on next page

Profiled steel sheet	Product reference	"Bright White Liner"	
	Generic type	Double sided corrosion coated S220GD+Z grade steel	
	Name of manufacturer	Kingspan Ltd	
	Thickness	0.465mm to 0.930mm ± 10%	
	Weight per unit area	See note 1 below	
	Profile reference	"EB (Equi Bead)" / "MB" (Mini Bead)	
	Flame retardant details	See note 1 below	
Bonding method (steel to insulation)		Auto adhesively bonded during the manufacturing process	
Insulation	Product reference	"IPNQuadCore™"	
	Generic type	Kingspan CFC/HCFC/HFC Free hybrid insulation	
	Name of manufacturer	Kingspan Ltd	
	Thickness	50mm and above	
	Density	38 kg/m ³ ± 15%	
	Flame retardant details	See note 2 below	
Bonding method (insulation to steel)		Auto adhesively bonded during the manufacturing process	
Profiled steel sheet	Product reference	"Bright White Liner"	
	Generic type	Double sided corrosion coated S220GD+Z grade steel	
	Name of manufacturer	Kingspan Ltd	
	Thickness	0.465mm to 0.930mm ± 10%	
	Weight per unit area	See note 1 below	
	Profile reference	"EB (Equi Bead)" / "MB (Mini Bead)"	
	Flame retardant details	See note 1 below	
Coating system	Product reference	"Bright White Liner"	
	Name of manufacturer	Arcelor Mittal	
	Overall application thickness	0.465mm to 0.930mm ± 10%	
	Colour	See note 1 below	
	Primer		Product reference
			Generic type
			Name of manufacturer
			Colour
			Number of coats
			Application thickness
			Application method
			Curing process
	Flame retardant details		
	Top coat	Product reference	"Bright White Liner"
		Generic type	Polyester
		Name of manufacturer	Arcelor Mittal
		Colour	"White"
Number of coats		One	
Application thickness		15 microns	
Application method		Roller	
Curing process		Oven	
Flame retardant details	See note 1 below		

Continued on next page

Air space details	A 40mm ventilated cavity was situated between the reverse face of each specimen and the calcium silicate backing board (as specified in EN13238: 2010)
Brief description of manufacturing process of panel	See note 2 below

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

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

The description of the specimens as given above is not as detailed as would usually be the case for descriptions included in **Exova Warringtonfire** test reports and the description may not fully comply with the requirements of the test standard. In all other respects however the tests were conducted fully in accordance with the requirements of the test standard and the test results are valid

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova Warringtonfire	Kingspan Limited	WF 363137 and WF 346047	EN ISO 11925-2
Exova Warringtonfire	Kingspan Limited	WF 363136 and WF 346046	EN 13823

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN ISO 11925-2 (30s exposure - surface)	F _s	6, 6	Nil, Nil	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN ISO 11925-2 (30s exposure – edge)	F _s	6, 6	20mm, Nil	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN ISO 11925-2 (30s exposure – edge turned at 90 degrees)	F _s	6, 6	68.3mm, 53.3mm	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN 13823	FIGRA _{0.2MJ}	3, 3	34.79, 29.50	Compliant
	FIGRA _{0.4MJ}		27.38, 20.54	Compliant
	THR _{600s}		2.19, 1.91	Compliant
	LFS		None, None	Compliant
	SMOGRA		4.90, 2.20	Compliant
	TSP _{600s}		42.31, 42.76	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 and BS EN 14509:2013.

4.2 Classification

The product, "Industrial Agro-Alimentaire (IND)", a family of coated profiled steel faced insulation panels, in relation to their reaction to fire behaviour are classified:

B

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 applications, excluding flooring and linear pipe thermal insulation is:

Fire Behaviour		Smoke Production			Flaming Droplets	
B	-	s	1	,	d	0

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 14509:2013.

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

This classification is also valid for the following product parameters as determined in connection with EN 14509:2013:

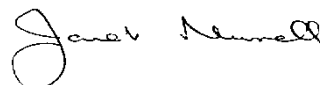
Overall product thickness	60mm and above \pm 15%
Insulation thickness	60mm and above
Thickness of metal facing	0.465mm to 0.930mm \pm 10%
Surface coating	Valid for all coatings with a PCS value in the range 0 to 4 MJ/m ²
Density of insulation	Tested density \pm 15%
Product weight per unit area	No variation allowed
Product colour/pattern	Any colour
Product composition	No variation allowed
Product construction	No variation allowed
Profile thickness	Up to 5mm / valid for other types of flat or light profiles.

SIGNED



.....
Katie Williams
Junior Certification Engineer

APPROVED



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

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 pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible **Exova Warringtonfire** staff.

Issue 2: 16th February 2017, removed Isocab, changed thickness to 60mm