

Title:

Classification of
Fire Resistance Performance
in accordance with
EN 13501-2: 2007 + A1: 2009
for Non-Loadbearing Walls
Comprising Kingspan
Isocab industrial
Agroalimentaire and KS1180AB
Panels

Notified Body No:

0833

Product Name:

Isocab industrial
Agroalimentaire and KS1180AB

**WF Classification Report
No:**

340775

Prepared for:**Kingspan Limited and
ISOCAB France SAS**

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Date:

25th June 2014

1. Introduction

This classification report defines the classification assigned to non-loadbearing wall constructions comprising Isocab industrial Agroalimentaire and KS1180AB Panels, in accordance with the procedures given in EN 13501-2:2007 + A1: 2009.

2. Details of classified product

2.1 General

The element, Isocab industrial Agroalimentaire and KS1180AB Panels, is a Self-supporting double skin metal faced insulating panels as defined in the EN 14509 and is used within non-loadbearing wall assemblies. Its function is to resist fire in respect of the fire performance characteristics given in Clause 5 of EN 13501-2: 2007 + A1: 2009.

2.2 Product description

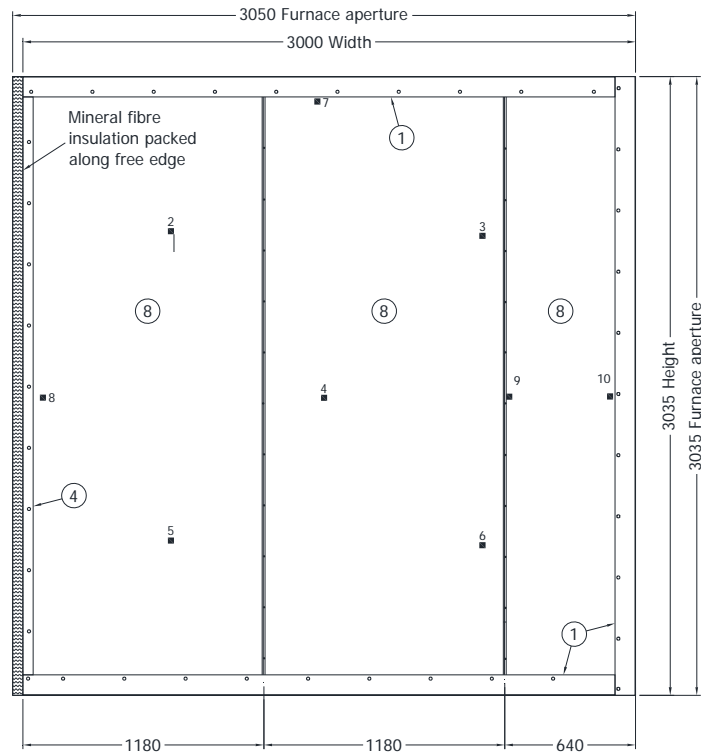
The element, Isocab industrial Agroalimentaire and KS1180AB Panels, is fully described in the test report provided in support of this classification, which is detailed in Clause 3.1.

3. Supporting Data

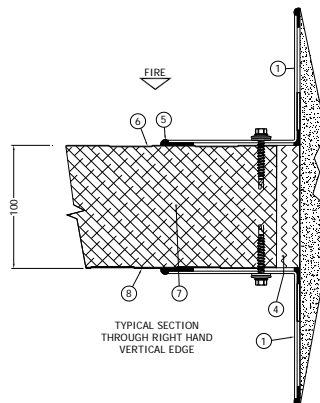
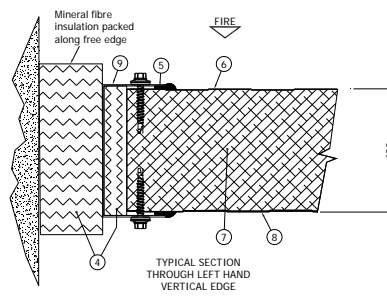
3.1 Test reports and extended application reports used in support of classification

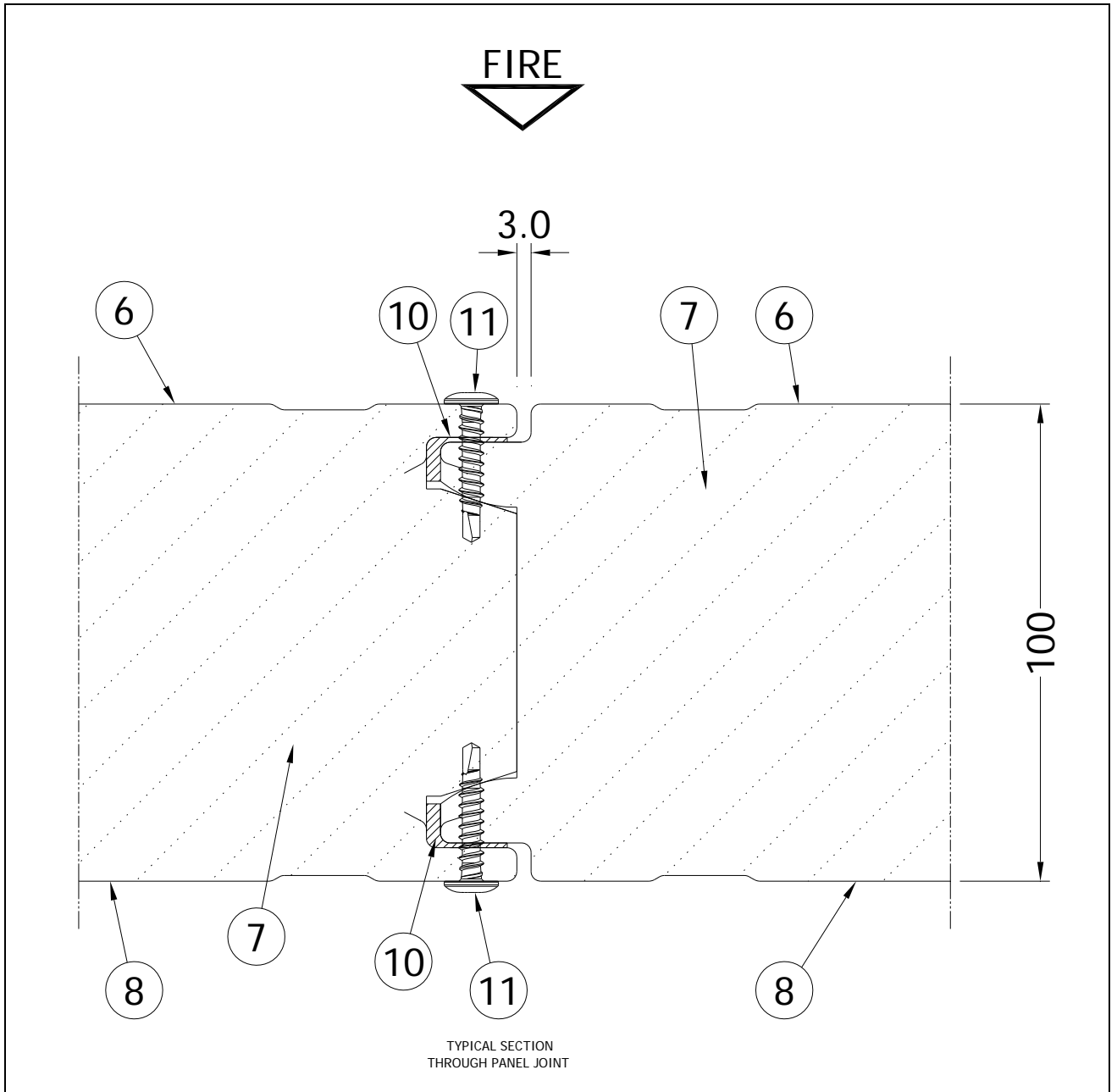
Name of laboratory	Name of sponsor	Test report/exap report no.	Test method/ EXAP rules
Exova Warringtonfire Notified Body No. 0833	Kingspan Limited and ISOCAB France SAS	WF 330922	EN 1364-1: 1999
Exova Warringtonfire Notified Body No. 0833	Kingspan Limited and ISOCAB France SAS	WF 340773	EN 15254-5: 2009
Test Results:			
Integrity	Sustained flaming	54 minutes	
	Gap gauge	56 minutes – no failure	
	Cotton Pad	54 minutes	
Insulation	34 minutes		
Specimen Details:			
Panel reference:	Isocab industrial Agroalimentaire and KS1180AB, 100 mm thick		
Panel Orientation:	Vertical		

Summary of WF Test Report No. 330922



■ Positions of thermocouples





Schedule of Components

Item

Description

Isocab industrial Agroalimentaire and KS1180AB 100mm

1. Perimeter Angle (fire / non fire side)

Material	:	Mild steel
Thickness	:	3 mm
Overall size	:	100 mm x 100 mm
Length	:	3000mm

Fixings to restraint frame (fire side)

i. manufacturer	:	SFS Intec
ii. type	:	Self tapping Concrete screws
iii. reference	:	ISOFAST T1-6.3 x 55
iv. centres	:	300 mm

2. Panel Fixings

Manufacturer	:	SFS Intec
Type	:	Self drilling self tapping screws
Reference	:	SX3/9 S16 – 6 x 29mm
Material	:	Stainless Steel
Centres	:	300mm

3. Perimeter edge seal

Manufacturer	:	Technofire
Reference	:	62853
Material	:	Graphite intumescent seal
Overall Size	:	30mm x 2mm thick
Application	:	Self adhered

4. Perimeter Insulation

Manufacturer	:	Thermal Ceramics
Reference	:	Superwool 607
Material	:	Ceramic fibre based insulation
Thickness	:	25 mm, uncompressed
Density	:	96 kg/m ³ , uncompressed
Fitting method	:	Fitted between panel perimeter edges and the lining of the restraint frame and panel capping channel, item 9. Also fitted into voids between the panel skins on the unexposed face, item 7, and the perimeter angles, item 1.

5. Perimeter Sealant

Manufacturer	:	Nullifire, a division of Tremco Illbruck International
Reference	:	M701
Material	:	Waterbourne acrylic based fire resisting mastic
Application method	:	Cartridge gunned

6. Panel Skins (Exposed Face)

Manufacturer	: Arcelor Mittal
Reference	: Backing Tray
Profile	: Standard Rib
Material	: Double side corrosion coated S280 grade steel
Thickness	
i. overall	: 0.5 mm +/- 10%
ii. coating	: 25 microns, stated
Overall size	: 3000 mm long

7. Panel Core

Manufacturer	: Isocab
Reference	: Isophenic (IPN)
Type	: HCFC free (closed cell foam)
Thickness	: 100 mm, nominal
Density	: 38 kg/m ³ , stated nominal
Fixing method	: Bonded to panel skins via auto-adhesive qualities of the foam whilst curing

8. Panel Skins (Unexposed Face)

Manufacturer	: Macrometal
Reference	: External weather sheet
Profile	: Standard Rib
Material	: Double sided corrosion coated S280 grade steel
Thickness	
i. overall	: 0.5 mm +/- 10%
ii. coating	: 25 microns
Overall size	: 3000 mm

9. Free edge cap

Material	Galvanised mild steel
Thickness	1mm
Size	50mm x 103mm x 50mm
Overall Length	3000mm
Fixing position	Every 300mm with SX3/9 S16 – 6 x 29mm

10. Panel Joint Sealant

Manufacturer	: Geocel Ltd
Reference	: Dow 700 Fire stop
Material	: Fire resistance silicone sealant
Application method	: Cartridge gunned into the joint detail nose on the inside 5mm bead inside both nose groves

11. Panel Joint fixings

Manufacturer	: SFS Intec
Type	: Self Drilling Self Tapping Screws
Reference	: SXW 5.5 x 44mm
Material	: Stainless Steel
Centres	: 250mm on both joint details fire side/non fire side

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with Clause 7.5 of EN 13501-2: 2007 + A1: 2009.

4.2 Classification

The element, Isocab industrial Agroalimentaire and KS1180AB, is classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	-	M	C	S	IncSlow	sn	ef	r
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**Fire resistance classifications:
EI 30**

4.3 Direct Field of application

The field of direct application of results is restricted to governing the allowable changes to the test specimen following a successful fire resistance test. These variations can be introduced automatically without the need for the sponsor to seek additional evaluation, calculation or approval.

The direct field of classification has been defined based on the rules given in the EN 1364-1:1999 and in the EN 14509:2009

Unless otherwise stated in the following text the construction of the tested assembly shall be the same as that tested.

- The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability.
- The orientation of the panels can be horizontal as well vertical (tested orientation) with a span of 4.00 m
- The height (span) of the construction may be decreased.
- The thickness of the panels may be increased using the same insulating core material
- The coating on the exposed side facing can be any colour
- The linear dimensions (but not thickness) of the panels may be decreased
- The width of the panel may be increased by 20% to 1416 mm
- The facings (skins) can be made from any grade of steel with a thickness in the range of 0.25 – 0.75 mm (± 50 % of tested thickness)

- The profile geometry can be changed to any profile
- The results are not valid for any change in shape of configuration of the joint design
- The number of fixings used to attach the panels to supporting constructions may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased.

4.4 Extended Field of application

The field of extended application of test results is defining allowable changes to the tested construction, following one or more fire resistance tests, and defined calculation and judgement procedures. These variations can be introduced without the need for the sponsor to seek additional approval.

The extended field of classification has been defined based on the rules and calculation methods given in the EN 15254-5: 2006 in connection with the EN 1364-1:1999 and in the EN 14509:2006

Unless otherwise stated in the following text and listed in the field of direct application the construction of the tested assembly shall be the same as that tested.

- As stitching is used in the panel to panel joints in the reference test the span may be increased up to 12.0 m with the same fixing type and distance between centres as in the tested assembly;
- The span may only be increased in the tested orientation (vertical orientation);
- In the case of an increase in span, the number of fasteners should be increased to be able to carry the increased load during the required period. The required number of fasteners can be calculated as described in Annex B of EN 15254-5.

5. Limitations

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

SIGNED



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F. Paap
Certification Engineer

APPROVED



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A. Kearns
Technical Manager

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