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Testing. Advising. Assuring.

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:

340776

Prepared for:

Kingspan Limited and

ISOCAB France SAS

Z.I de Grande Synthe,
3, Rue Charles Fourier,
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Grande Synthe CEDEX,
France,

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

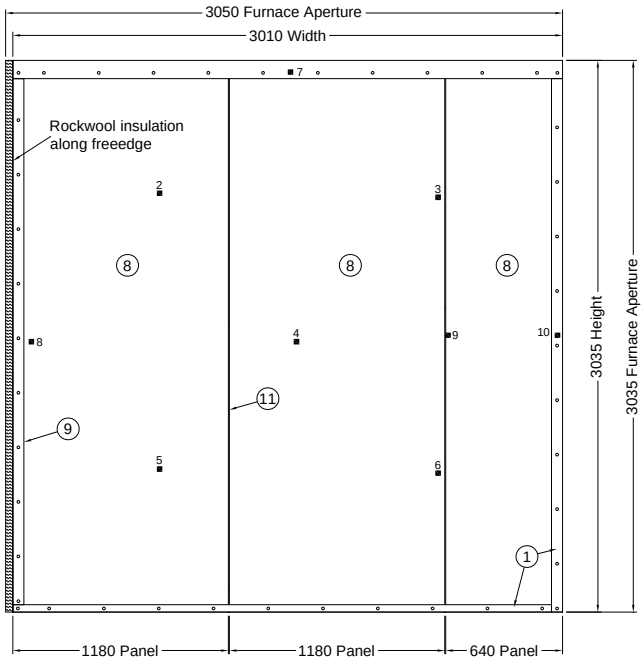
3.1 Test reports and extended application reports used in support of classification

Name of laboratory	Name of sponsor	Test report / exap report no.	Test method / EXAP rules
Exova Warringtonfire Notified Body No. 0833	Kingspan Ltd and Isocab France SAS	WF 333767	EN 1364-1: 1999

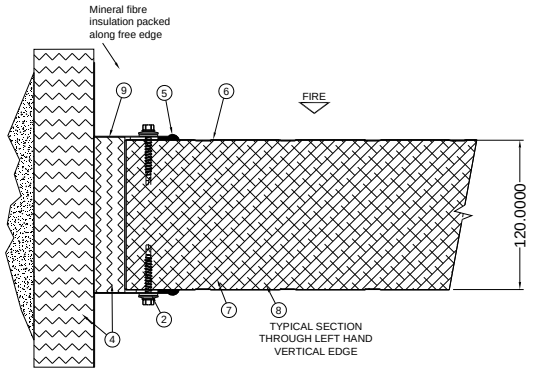
Test Results:		
Integrity	Sustained flaming	33 minutes
	Gap gauge	36 minutes – no failure
	Cotton Pad	33 minutes
Insulation		33 minutes – due to integrity failure

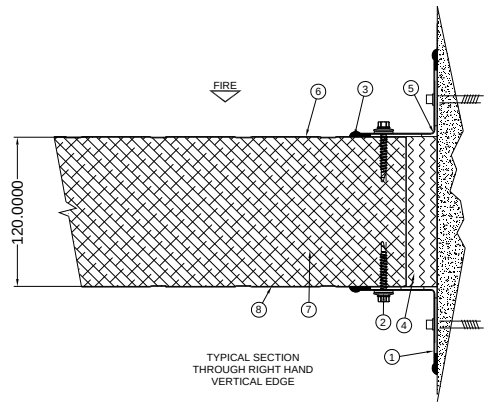
Specimen Details:	
Panel reference:	Isocab industrial Agroalimentaire and KS1180AB, 120 mm thick
Panel Orientation:	Vertical

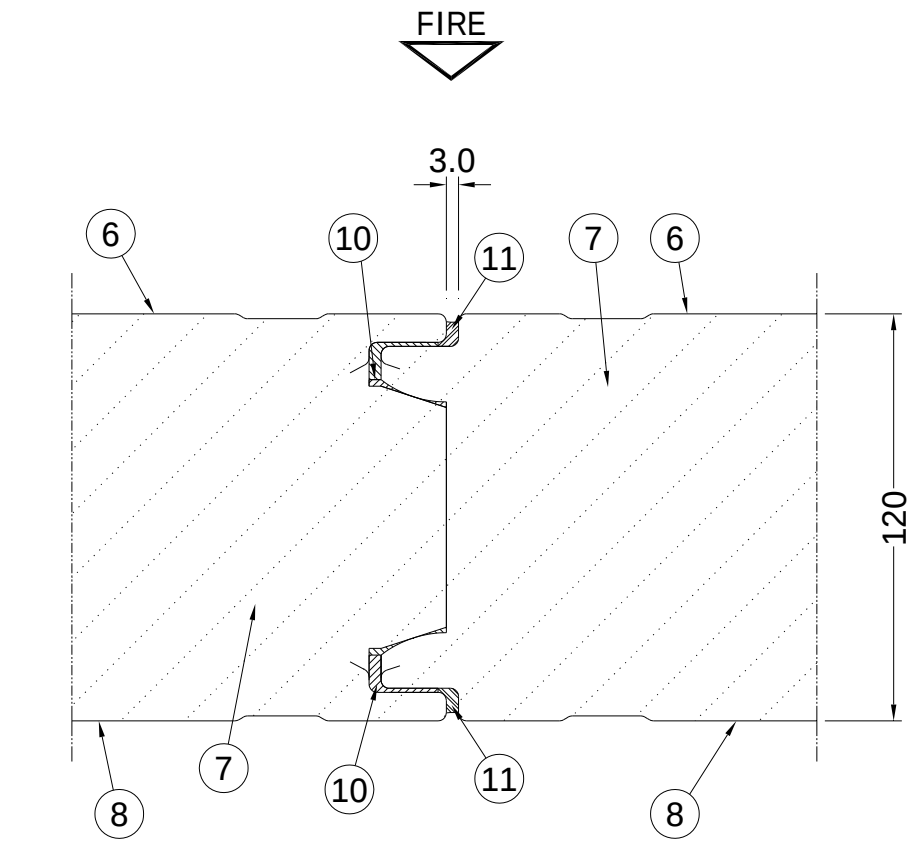
Summary of WF Test Report No. 333767



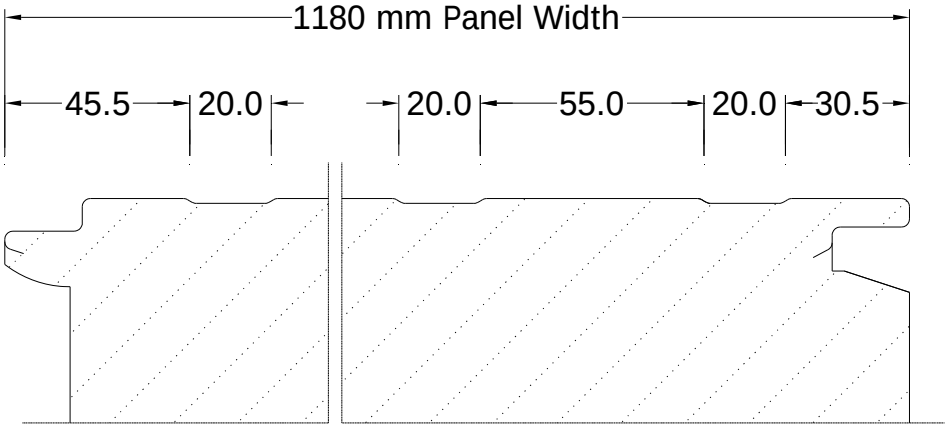
■Positions of thermocouples







TYPICAL SECTION
THROUGH PANEL JOINT



TYPICAL SECTION
THROUGH PANEL JOINT

Schedule of Components

Item	Description

Isocab industrial Agroalimentaire and KS1180AB 120mm

1. Perimeter Angle (fire side)

Material	:	Light steel
Thickness	:	0.63 mm
Overall sizes	:	100 mm x 60 mm (Top)
	:	60 mm x 60 mm (Sides)
	:	60 mm x 40 mm (Bottom)
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
Reference	:	SX3/9 S16-6 X 29MM
Material	:	Stainless steel
Centres	:	300mm

3. Perimeter edge seal

Manufacturer	:	Dow corning / Geocel Ltd
Reference	:	Dow 700 Fire stop
Material	:	Fire resistance silicone sealant
Application	:	Cartridge gunned to the perimeter steel angle and panels

4. Perimeter Insulation

Manufacturer	:	Rockwool Ltd
Reference	:	Euroclass A1
Material	:	Fibre based insulation
Thickness	:	100 mm, uncompressed (25 – 50 mm compressed)
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.

5. Perimeter Sealant

Manufacturer	:	Dow corning / Geocel Ltd
Reference	:	Dow 700 Fire stop
Material	:	Fire resistance silicone sealant
Application method	:	Cartridge gunned to perimeter steel angle and panels

6. Panel skins (Exposed Face)

Manufacturer	:	Arcelor Mittal
Reference	:	Backing Tray
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 long

7. Panel Core

Manufacturer	:	Isocab
Reference	:	Isophenic (IPN)
Type	:	HCFC Free (closed cell foam)
Thickness	:	120 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 (Un-xposed 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	:	Light steel
Thickness	:	0.63 mm
Size	:	60 mm X 60 mm
Overall Length	:	3000mm
Fixing Position	:	Every 300mm with SX3/9 S16 – 6 x 29mm into the panel only

10. Panel Joint Sealant (Inside Joint)

Manufacturer	:	Lorient Polyproducts Ltd
Reference	:	LORIENT
Material	:	Intumescent sealant
Application method	:	Cartridge gunned into the joint detail 5mm beads on both sides of the inside of the groove nose detail.

11. Panel Joint Sealant (Along panel gap)

Manufacturer	:	Dow corning / Geocel Ltd
Reference	:	Dow 700 Fire stop
Material	:	Fire resistant silicone sealant
Application method	:	Cartridge gunned into the joint gap on the panels in the outside gap 2mm bead down the joint

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

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.

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