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Classification of reaction to fire performance in accordance with EN 13501-1: 2007 +A1: 2009 on Isocab Industrial Agroalimentaire also known as KS1180AB

Prepared for:

Isocab France SAS
Z.I. de Grande Synthe
3, Rue Charles Fourier
CS 30142 F-59792 Grande Synthe CEDEX
France

18 November 2013

Test report number 289654-4A
Issue 1

UKAS TESTING

0578

Protecting People, Property and the Planet

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Date 18th November 2013

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1 Introduction

This classification report defines the classification assigned to Isocab Industrial Agroalimentaire also known as KS1180AB in accordance with the procedures given in EN 13501-1:2007+A1: 2009[1]

BRE Global

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

Sponsor:	Kingspan Limited, Greenfield Business Park No.2, Greenfield, Holywell, Flintshire, CH8 7GJ, UK.
Prepared for:	Isocab France SAS, Z.I. de Grande Synthe, 3, Rue Charles Fourier, CS 30142 F-59792 Grande Synthe CEDEX, France.
Place of Manufacture:	Isocab France SAS, Z.I. de Grande Synthe, 3, Rue Charles Fourier, CS 30142 F-59792 Grande Synthe CEDEX, France.
Prepared by:	BRE Global Ltd., Bucknalls Lane, Garston, Watford, WD25 9XX, England.
Product name:	Isocab Industrial Agroalimentaire also known as KS1180AB.
Classification report No.:	289654-4A.
Issue number:	1.
Date of issue:	18 November 2013.

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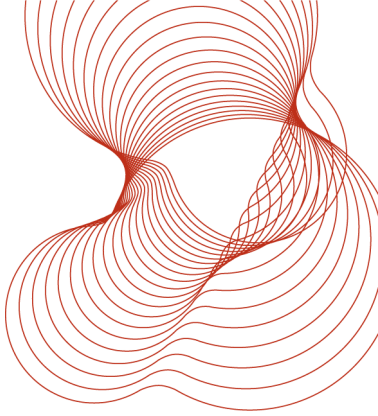


2 Details of classified product

2.1 General

The product, Isocab Industrial Agroalimentaire also known as KS1180AB, is defined by the test sponsor as a self-supporting double skin metal faced insulating panel in accordance with EN 14509[2].

2.2 Product description

The product is described in section 2.2.2.

2.2.1 Traceability

The test sample was supplied by the test sponsor. BRE Global was not involved in the sampling process and therefore cannot comment upon the relationship between the samples supplied for test and the product supplied to market.

2.3 Sample details

Name and address of test sponsor	Kingspan Limited, Greenfield Business Park No.2, Greenfield, Holywell, Flintshire, CH8 7GJ, UK.
Report prepared for	Isocab France SAS, Z.I. de Grande Synthe, 3, Rue Charles Fourier, CS 30142 F-59792 Grande Synthe CEDEX, France.
Place of manufacture of product	Isocab France SAS, Z.I. de Grande Synthe, 3, Rue Charles Fourier, CS 30142 F-59792 Grande Synthe CEDEX, France.
Sample	
Description of specimens (as received)	A profiled self-supporting double skin metal faced insulating panel with a light yellow rigid foam core, a white coated metal interior facing (test face) and a white coated exterior metal facing The sample had a trapezoidal profile on both the interior face and exterior face.
Description of specimens (Test sponsor's declaration)	A coated profiled steel faced foam insulation panel. The test sponsor's product description is reproduced in Appendix A.
Product/component tested	40 mm-thick Isocab Industrial Agroalimentaire also known as KS1180AB.
Sponsor's specimen ID	Isocab Industrial Agroalimentaire/KS1180AB.
Type of product / component	Self-supporting double skin metal faced insulating panel.
Colour	Interior face: White. Exterior face: White. Core: Light yellow.
Product properties	
Nominal declared thickness	40 mm. See individual components in Table A.1.
Nominal declared mass per unit area	Note 1. See Table A.1 for individual components.
Nominal declared density	Note 1. See Table A.1 for individual components.
Face to be tested	Interior.
Insulation properties	
Type of insulation	Hydrochlorofluorocarbon (HCFC) free closed cell foam.
Nominal declared density	40 kg/m³ ± 10 %.
Specimen measurements	

Measured thickness	41.2 mm (range 40.6 mm - 41.9 mm) maximum. 38.9 mm (range 38.3 mm - 39.5 mm) minimum.
Measured mass per unit area (panel only)	11.4 kg/m² (range 11.3 kg/m² - 11.4 kg/m²).

Note 1: This information was not supplied by the test sponsor.

3 Reports & results in support of this classification

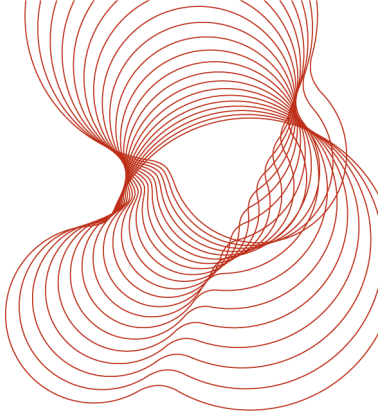
3.1 Reports

Name of Laboratory	Name of sponsor	Test reports Nos.	Test method/field of application rules
BRE Global Ltd.	Kingspan Limited	289654-3	EN ISO 11925-2: 2010[3]
BRE Global Ltd.	Kingspan Limited	289654-2	EN 13823: 2010[4]

3.2 Results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter -mean (m)	Compliance with parameters (Class B-s2, d0)
EN ISO 11925-2: 2010 Surface exposure, 30 s flame application time (289654-3)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		Not observed	Compliant
EN ISO 11925-2: 2010 Edge exposure, 90° to face, midpoint insulation, 30 s flame application time (289654-3)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		Not observed	Compliant
EN 13823: 2010 (BREG report 289654-2)	FIGRA $_{0.2MJ}$ FIGRA $_{0.4MJ}$ LFS THR 600s	3	32.3 W/s 22.5 W/s < edge specimen 2.1 MJ	Compliant Compliant Compliant Compliant
	SMOGRA TSP600s		5.6 m²/s² 53.0 m²	Compliant Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Not observed Not observed	Compliant Compliant

(-) Not applicable



4 Classification and field of application

4.1 Reference of classification

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

4.2 Classification

The product, Isocab Industrial Agroalimentaire also known as KS1180AB, in relation to reaction to fire behaviour, is classified:

B

The additional classification in relation to smoke production is:

s2

The additional classification in relation to flaming droplets / particles is:

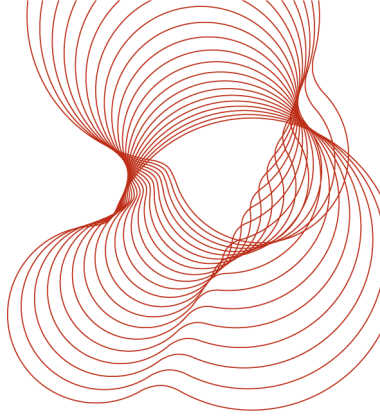
d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation products is:

Fire Behaviour		Smoke Production			Flaming Droplets	
B	-	s	2	,	d	0

i.e. B-s2, d0

Reaction to fire classification: B-s2, d0



4.3 Field of application

This classification is valid for the following end-use applications:

i. Self-supporting double skin metal faced insulating panel:

Composition/build up	No variation in composition or build-up allowed. No variation in ordering of layers.
Metal facing	• Valid for all grades of the tested metal type. • Valid for all thicknesses between the tested thickness and up to +100 % of the tested thickness (i.e. 0.5 mm - 1.0 mm). • Valid for all types of flat or light profile. • Valid for surface coatings with a Q_{PCSs} value ≤ that tested, within manufacturing tolerances. • Valid for all coating colours.
Joint detail	Valid within normal tolerances. Not valid for changes of shape or configuration.
Adhesive	Valid for auto adhesively bonded products only.
Seals and gaskets	Valid only for the types of joint seals and gaskets tested and for those of equal or lower Q_{PCS}.
Insulating core	• Isophenic (SP40). Valid for the same chemical system and blowing agent as that tested. • Valid for densities in the range 34 kg/m³ - 46 kg/m³.
Thickness of panel	Valid for panel thicknesses in the range 34 mm - 46 mm.
Orientation of panels	Valid for vertically or horizontally installed panels in end-use wall and ceiling applications.
Metal corner flashings	• Valid for end-use metal flashings of ≥ thickness and dimension. • Valid for all types of steel flashings.
Protection over cut edges	Valid for all end use applications.
Fixing for meal flashings	Valid for fixing spacing ≤ 400 mm.
Seals (if applicable)	Valid for seals of the same type as that tested or seals with the same or lower Q_{PCS}.
Face exposed to internal fire	Valid for Interior face only.

This classification is valid for the following substrates and air gaps:

i) Mounted free-standing or with a ventilated cavity.

5 Limitations

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

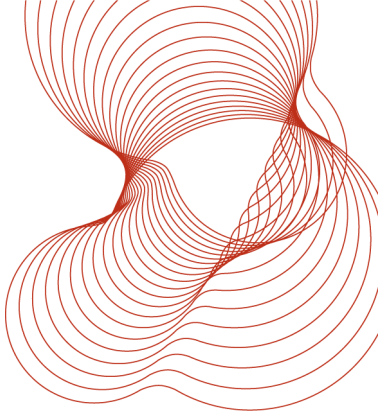
The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This confirms that the products design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples.

6 References

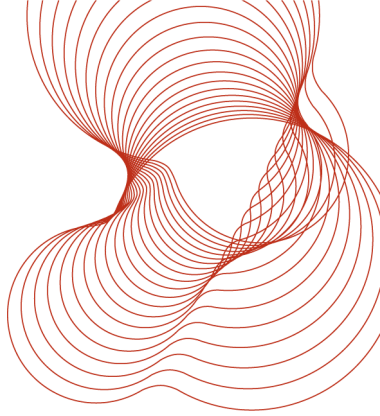
1. EN 13501-1: 2007+A1: 2009. Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests. CEN, Avenue Marnix 17, B-1000 Brussels. 2009.
2. EN 14509: 2006 Incorporating corrigendum November 2008. Self-supporting double skin metal faced insulating panels – Factory made products - Specifications. CEN, Avenue Marnix 17, B-2000 Brussels. 2008.
3. EN ISO 11925-2: 2010. Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-source test. CEN, Avenue Marnix 17, B-1000 Brussels. 2010.
4. EN 13823: 2010. Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item. CEN, Avenue Marnix 17, B-1000 Brussels. 2010.



Appendix A

Test sponsors product description

Company name: Isocab France SAS - France			
Trade name			Isocab Industrial Agroalimentaire and KS1180AB
General description			A coated profiled steel faced foam Insulation panel
Product reference of system			Isocab Industrial Agroalimentaire/KS1180AB
Overall product thickness			40 mm
Overall weight per unit area of composite			To be determined by BRE
Product configuration			• Coating (Test face) • Profiled steel • Insulation • Profiled steel • Coating (Reverse face)
Coating System	Product reference		Internal Liner Sheet
	Name of manufacturer		Arcelor Mittal
	Overall application thickness		25 microns ± 10 %
	Colour		White
	Top Coat (Test Face)	Product reference	White liner
		Generic type	Polyester
		Name of manufacturer	Option 2
		Colour	White
		Number of coats	One
		Application thickness	25 microns
		Application method	Roller
		Curing process	Oven
		Flame retardant details	Option 2
Coating System	Backing Coat	Product reference	Option 2
		Generic type	Option 2
		Name of manufacturer	Option 2
		Colour	Option 2
		Number of coats	Option 2
		Application thickness	Option 2
		Application method	Option 2
		Curing process (duration and temperature)	Option 2
		Flame retardant details	Option 2
Profiled steel sheet		Product reference	White Liner
		Generic type	Double sided corrosion coated S280
		Name of manufacturer	Isocab
		Thickness	0.5 mm ± 10 %
		Weight per unit area	Option 2
		Profile reference	Standard Rib.
		Flame retardant details	Option 2
Bonding method (steel to insulation)			Auto adhesively bonded during the



Company name: Isocab France SAS - France			
			manufacturing process
Insulation		Product reference	Isophenic (SP40)
		Generic type	Hydrochlorofluorocarbon (HCFC) free closed cell foam
		Name of manufacturer	Isocab
		Thickness	40 mm
		Density	40 kg/m³ ± 10 %
		Flame retardant details	Option 1
Bonding method (insulation to steel)			Auto adhesively bonded during the manufacturing process
Profiled steel sheet		Product reference	External weather sheet
		Generic type	Double sided corrosion coated S280
		Name of manufacturer	Isocab
		Thickness	0.5 mm ± 10 %
		Weight per unit area	Option 2
		Profile reference	Standard Rib
		Flame retardant details	Option 2
Coating System	Product reference		External weather sheet
	Name of manufacturer		Macrometal
	Overall application thickness		25 microns ± 10 %
	Colour		White
	Primer	Product reference	Option 2
		Generic type	Option 2
		Name of manufacturer	Option 2
		Colour	Option 2
		Number of coats	Option 2
		Application thickness	Option 2
		Application method	Option 2
		Curing process	Option 2
		Flame retardant details	Option 2
Coating System	Top Coat	Product reference	External weather sheet
		Generic type	Polyester
		Name of manufacturer	Option 2
		Colour	White
		Number of coats	One
		Application thickness	25 microns
		Application method	Roller
		Curing process	Oven
		Flame retardant details	Option 2
Mounting and fixing details			
Brief description of manufacturing process of panel			Option 1

Option 1 – The sponsor was unwilling to provide this information.

Option 2 – The sponsor was unable to provide this information.

==========REPORT ENDS==========