Reaction to fire classification report No. 20066F

Owner of the classification report

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Introduction

This classification report defines the classification assigned to the product ***'JI ECO PIR'*** in accordance with the procedures given in the standard EN 13501-1:2018: Fire classification of construction products and building elements - Part 1: classification using data from reaction to fire tests.

This classification report consists of 7 pages and may only be used or reproduced in its entirety

1. DETAILS OF CLASSIFIED PRODUCT

a) General

The product ***JI ECO PIR*** is defined as a '*sandwich panel*'.
Its classification is valid for the following end use application(s):
Used as self-supporting insulating panel

b) Product description

This description is based on information given by the sponsor.

		Nominal values	
Trade name / product reference		**JI ECO PIR (see Figure 1)**	
General description		A foil faced PIR foam insulation panel with steel backing	
Panel thickness in analogy with § D.2.1 of EN 14509:2013 (mm)		30 (sample 1)	100 (sample 2)
Overall (total) thickness (mm)		65 (sample 1)	135 (sample 2)
Overall weight per unit area (g/m²)		5760 (sample 1)	9532 (sample 2)
Name of manufacturer / supplier		Joris Ide nv	
Coating (Test face)	Generic type	Protection lacquer	
	Product reference	ALU foil coating	
	Name of manufacturer	Known by the laboratory	
	Colour	RAL 9002 Grey white	
	Thickness of coating (µm)	Unknown by the sponsor	
	Number of coats	2	
	Applied amount (g/m²) per layer	8 + 1,7	
	PCS-value (MJ/m²)	0,21	
	Use of fire retardants	No	
Rigid facing (Test face)	Generic type	Aluminium foil	
	Product reference	Aluminium foil for PIR foam	
	Name of manufacturer	Known by the laboratory	
	Density (kg/m³)	2700	
	Weight per unit area (g/m²)	108	
	Thickness (µm)	40	
	Profile reference and height	Flat, stucco embossed (waffled)	
Bonding Method (facing to insulation)		Self-adhesive	
Insulation core	Generic type	Polyisocyanurate (PIR) foam	
	Trade name / product reference	JI45 G	
	Name of manufacturer	Joris Ide nv	
	Thickness (mm)	30 (65 overall thickness) – sample 1 100 (135 overall thickness) – sample 2	
	Colour	Yellow	
	Density (kg/m³)	38	
	Use of fire retardants	No	

		Nominal values
Bonding Method (facing to insulation)		Self-adhesive
Rigid facing (reverse face)	Generic type	Steel
	Product reference	Coated galvanized steel
	Name of manufacturer	Arcelor Mittal
	Density (kg/m³)	7850
	Thickness (mm)	0,45
	Profile reference and height	35-250-1000 (step-shaped)
Coating (reverse face)	Generic type	Polyester 25 µm
	Product reference	PE25
	Name of manufacturer	Arcelor Mittal
	Colour	RAL 7016 Anthracite grey
	Thickness of coating (µm)	25
	PCS-value (MJ/m²)	1,3
	Use of fire retardants	No
Joint seal (only for the 30 mm panel)	Type of product	Joint seal consisting of polyurethane
	Product reference	ISO-COIL AV T 01
	Thickness (mm)	5
	PCS value (MJ/mm width/m)	0,0078

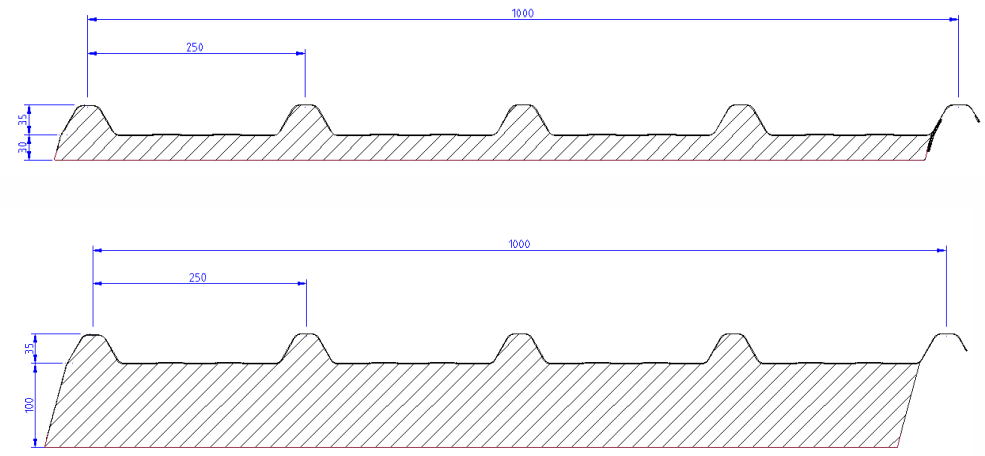

Figure 1: JI ECO PIR in thicknesses 30 mm & 100 mm

Figure 2: Vertical panel-to-panel joint in the long wing of JI ECO PIR 30 mm

More details (e.g. mounting and fixing) are available in the test reports in support of this classification (§2a).

2. TEST REPORTS AND EXAP REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

a) Test reports (and EXAP reports)

Name of the laboratory	Name of the sponsor	Test report ref. No.	Test method and date
WFRGENT nv Ghent, Belgium	JORIS IDE NV	20066A & 20066B	EN ISO 11925-2:2010/AC:2011
WFRGENT nv Ghent, Belgium	JORIS IDE NV	20066C & 20066D	EN 13823:2010+A1:2014
WFRGENT nv Ghent, Belgium	JORIS IDE NV	20066E	EXAP according to CEN/TS 15117 (August 2005)

b) Test results

Official test results used for the classification

Test method	Parameter	Number of tests	Results		Criteria for Class B-s2,d0	
			Continuous parameters Mean	Compliance parameters	Continuous parameters	Compliance parameters
EN ISO 11925-2 (*) (1) 30 s flame application:						
Surface exposure	$F_s \leq 150$ mm	6	(-)	Yes	(-)	Yes
- front side	Ignition filter paper		(-)	No	(-)	No
Edge exposure						
- mid point 1,5 mm behind surface	$F_s \leq 150$ mm	6	(-)	Yes	(-)	Yes
	Ignition filter paper		(-)	No	(-)	No
Edge exposure	$F_s \leq 150$ mm	6	(-)	Yes	(-)	Yes
- turned 90°	Ignition filter paper		(-)	No	(-)	No
(*) The material didn't melt nor pull away from the pilot burner. *(1) Based on the results obtained in test report No. 20066B – JI ECO PIR 30 mm.*						
EN 13823 (2)	FIGRA $_{0,2\ MJ}$ (W/s)	3	79	(-)	≤ 120	(-)
	FIGRA $_{0,4\ MJ}$ (W/s)		79	(-)	(-)	(-)
	$LFS_{<edge}$		(-)	Yes	(-)	Yes
	THR_{600s} (MJ)		4,2	(-)	≤ 7,5	(-)
	SMOGRA (m^2/s^2)		25	(-)	≤ 180	(-)
	TSP_{600s} (m^2)		108	(-)	≤ 200	(-)
	Flaming droplets/particles					
	f < 10 s		(-)	No	(-)	No
	f > 10 s		(-)	No	(-)	No
(2) Based on the results obtained in test report No. 20066D – JI ECO PIR 30 mm.						

(-) Not applicable.

Comparative test results used for the determination of the worst case thickness

EN ISO 11925-2 *Test report No. 20066A*	$F_s \leq 150$ mm	Ignition filter paper	Average maximal flame spread (mm) (**)
Sample 1 (*): JI ECO PIR 30 mm	Yes	No	140
Sample 2: JI ECO PIR 100 mm	Yes	No	107

(*) The test results of this sample were re-used in the official test report No. 20066B.

(**) The average maximal flame spread value (mm) was calculated over all executed edge exposures, turned over 90° (PIR foam). The flame spread values of the standard edge and surface exposure are negligible since the aluminium foil is the fire exposed side.

EN 13823 *Test report No. 20066C*	FIGRA $_{0,2\ MJ}$ (W/s)	FIGRA $_{0,4\ MJ}$ (W/s)	THR_{600S} (MJ)	SMOGRA (m^2/s^2)	TSP_{600S} (m^2)
Sample 1 (*): JI ECO PIR 30 mm	73	73	4,2	22	106
Sample 2: JI ECO PIR 100 mm	70	70	4,9	22	118

(*) The test results of this sample were re-used in the official test report No. 20066D (as sample 1).

3. CLASSIFICATION AND FIELD OF APPLICATION

a) Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018.

The harmonized product standard EN 14509:2013 has been used as guideline for the mounting and fixing of the SBI test specimens.

b) Classification

The product ***JI ECO PIR*** in relation to its reaction to fire behavior is classified as:

Fire behavior	Smoke production	Flaming droplets
B	**s2**	**d0**

c) Field of application

This classification for the product as described in §1b, is valid for the following end use applications:

- Freestanding (product as such)
- Fire exposed side: Stucco embossed aluminium facing (white lacquered)
- With or without vertical joints as shown in Figure 2
- With corner flashings as described on next page

This classification is valid for the following product parameters:

In analogy with Table C.1 of EN 14509:2013 (Annex C)

PARAMETERS	Validity of the test
Aluminium facing (exposed side) and Metal facing (unexposed side)	Type of product (exposed side): Aluminium foil Grade of metal (unexposed side): Galvanized steel
	Thickness of aluminium/metal facing excluding organic coatings: Exposed side: 40 µm Unexposed side: 0,45 mm
	Profile and geometry of inside facing (exposed side): Flat, stucco embossed (waffled) Profile and geometry of outside facing (unexposed side): Profiling up to 35 mm (step-shaped; see Figure 1)
	Surface coating - tested face a) PCS of the coating: 0,21 MJ/m² b) Colour of the coating: RAL 9002 Grey white
Joint design	Similar type of joint as tested (see Figure 2)
Adhesive	None
Seals and gaskets (integral part of the panel)	Valid for the tested joint seal (in the 30 mm panel): ISO-COIL AV T 01 with a thickness of 5 mm and a PCS value of 0,0078 MJ/mm width/m.
Insulating core	a) Chemical composition: PIR foam (JI45 G) b) Density: 38 kg/m³
Thickness of panel (D)	All thicknesses between or equal to 30 mm and 100 mm.
Orientation of panels	Vertically tested

Metal corner flashings	External flashing: 50 mm x (D + 50) mm x 0,45 mm (thickness) Internal flashing: 100 mm x 100 mm x 1,50 mm (thickness)
Plastic corner flashings	None
Fixings for metal flashings	Standard spacing is 400 mm
Protection of cut edges	Without protection of cut edges
Seals	None

4. RESTRICTIONS

At the time the standard EN 13501-1:2018 was published, no decision was made concerning the duration of validity of a classification report.

Provisions of Regulation (EU) 305/2011, commonly known as the Construction Products Regulation (CPR), prevail over any conflicting provisions in the harmonized standards and technical specifications.

5. WARNING

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

According to the information mentioned by the sponsor on the technical information sheet there was no product standard for CE marking available at the time the classification report for the tested material/product was drafted.
When such a product standard is published, this report may be submitted again to the laboratory to evaluate the adequacy of the report for CE marking.

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