

Reaction to fire classification report No. 19766F

Owner of the classification report

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Introduction

This classification report defines the classification assigned to the product '**JI PERMAPAN 40-120 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 8 pages and may only be used or reproduced in its entirety

1. DETAILS OF CLASSIFIED PRODUCT

a) General

The product **JI PERMAPAN 40-120 PIR** is defined as a 'sandwich panel'.
Its classification is valid for the following end use application(s):
Used as roof and roof cladding.

b) Product description

This description is based on information given by the sponsor.

		Nominal values
Trade name / product reference		JI PERMAPAN 40-120 PIR – see Figures 1 to 3
General description		Sandwich panel with foam core and steel facings
Thickness according to § D.2.1 of EN 14509:2013 (mm)		Sample 1: 40 MV: 44 Sample 2: 120 MV: 125
Overall (total) thickness (mm)		Sample 1: 71,5 MV: 67 Sample 2: 151,5 MV: 150
Overall weight per unit area (g/m ²)		11920 (sample 1) 15120 (sample 2)
Name of manufacturer / supplier		Joris Ide
Coating (Test face)	Generic type	Polyester coating
	Product reference	Polyester 15 micron
	Name of manufacturer	Arcelor
	Colour	Ral 9002 (Grey white)
	Thickness of coating (µm)	15
	Number of coats	1
	Applied amount (g/m ²) per layer	(*)
	Application method	(*)
	PCS-value (MJ/m ²)	0,7
	Use of fire retardants	(*)
Rigid facing (Test face)	Generic type	Coated corrosion protected steel
	Product reference	0,37 polyester 15
	Name of manufacturer	Arcelor
	Density (kg/m ³)	7850
	Weight per unit area (g/m ²)	2905
	Thickness (mm)	0,37
	Profile reference and height	Lightly profiled, 1,3 mm depth
Bonding Method (facing to insulation)		Foaming process
Insulation core	Generic type	Polyisocyanurate (PIR) foam
	Trade name / product reference	JI50SA
	Name of manufacturer	Joris Ide
	Thickness (mm)	Variation to tile shape: 32,5 – 71,5 (sample 1) 112,5 – 151,5 (sample 2)
	Colour	Yellow
	Density (kg/m ³)	40 +/-5
Use of fire retardants		No

(*) Not known by the sponsor

		Nominal values
Bonding Method (facing to insulation)		Foaming process
Rigid facing (reverse face)	Generic type	Coated corrosion protected steel
	Product reference	0,45 grandem R9005
	Name of manufacturer	Arcelor
	Density (kg/m ³)	7850
	Weight per unit area (g/m ²)	3533
	Thickness (mm)	0,45
	Profile reference and height	Tile shape 24 - 183,3
Coating (reverse face)	Generic type	Polyester coating
	Product reference	Grandem R9005
	Name of manufacturer	Arcelor
	Colour	Ral 9005 (black)
	Thickness of coating (µm)	40
	Number of coats	2 (15 µm primer + 25 µm top coat)
	Applied amount (g/m ²) per layer	(*)
	Application method	(*)
	PCS-value (MJ/m ²)	1,8
	Use of fire retardants	(*)
Joint seals	Type of product	Two sealants are used within 1 panel: 1: PU sealant 2: PE sawtooth (matching form of tiles)
	Product reference	1: PU sealant 2: PE sealant
	Thickness (mm)	1: PU sealant: 5 mm 2: PE sealant: 6 mm
	Width (mm)	1: 25 mm (40 mm panel) à 110 mm (120 mm panel) 2: 40 mm (40 mm panel) à 55 mm (120 mm panel)
	PCS value (MJ/mm width/m)	1: 0,0075 (40 mm panel) - 0,0078 (120 mm panel) 2: no information (B3 fire reaction class)

(*) Not known by the sponsor

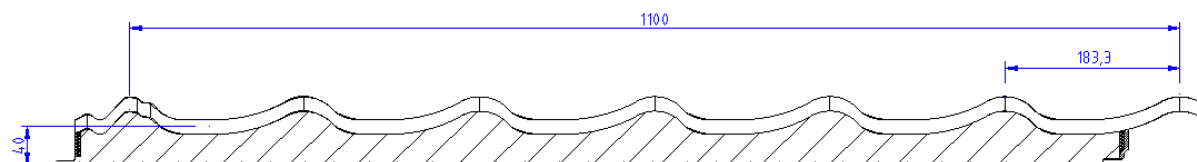


Figure 1: JI PERMAPAN 40 PIR



Figure 2: JI PERMAPAN 120 PIR



Figure 3: Panel-to-panel joint of JI PERMAPAN 120 PIR

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	19766A & 19766B	EN ISO 11925-2:2010/AC:2011
WFRGENT nv Ghent, Belgium	JORIS IDE NV	19766C & 19766D	EN 13823:2010+A1:2014
WFRGENT nv Ghent, Belgium	JORIS IDE NV	19766E	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: <u>Surface exposure</u> - front side <u>Edge exposure</u> - mid point 1,5 mm behind surface <u>Edge exposure</u> - turned 90°	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
EN ISO 11925-2 (*) (2) 30 s flame application: <u>Surface exposure</u> - front side <u>Edge exposure</u> - mid point 1,5 mm behind surface <u>Edge exposure</u> - turned 90°	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
	F _s ≤ 150 mm Ignition filter paper	6	(-)	Yes	(-)	Yes
			(-)	No	(-)	No
(*) The material didn't melt nor pull away from the pilot burner. (1) Based on the results obtained in test report No. 19766A – JI PERMAPAN 40 PIR. (2) Based on the results obtained in test report No. 19766B – JI PERMAPAN 120 PIR.						
EN 13823 (3)	FIGRA _{0,2 MJ} (W/s)	3	81	(-)	≤ 120	(-)
	FIGRA _{0,4 MJ} (W/s)		80	(-)	(-)	(-)
	LFS _{<edge}		(-)	Yes	(-)	Yes
	THR _{600s} (MJ)		4,4	(-)	≤ 7,5	(-)
	SMOGRA (m²/s²)		22	(-)	≤ 180	(-)
	TSP _{600s} (m²)		147	(-)	≤ 200	(-)
	Flaming droplets/particles					
	f < 10 s		(-)	No	(-)	No
	f > 10 s		(-)	No	(-)	No
(3) Based on the results obtained in test report No. 19766D – JI PERMAPAN 40 PIR.						

(-) Not applicable.

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

EN 13823 Test report No. 19766C	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 PERMAPAN 40 PIR	74	72	4,1	22	157
Sample 2: JI PERMAPAN 120 PIR	55	55	4,9	17	160

3. CLASSIFICATION AND FIELD OF APPLICATION

a) Reference of classification

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

The related harmonized product standard is EN 14509:2013 and has been used for the mounting and fixing of the SBI test specimens and for the direct field of application.

b) Classification

The product **JI PERMAPAN 40-120 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:

- Product as such
- Fire exposed side: internal steel sheet (see product description in §1b and the table on the next page)
- With corner flashings as described on the next page
- With joints as described on the next page

According to EN 14509:2013 (Annex C, table C.1), this classification is valid for the following product parameters:

PARAMETER	FACTORS	VALIDITY OF TEST
<u>Metal facing</u>	Grade of metal: coated corrosion protected steel	Valid for all grades of tested metal type
	Thickness of metal facing excluding organic coatings: Exposed side: 0,37 mm Unexposed side: 0,45 mm	Valid for thicknesses 0,37 mm to 0,74 mm Valid for thicknesses 0,45 mm to 0,90 mm
	Profile geometry of inside facing (tested side): Flat or light profiling up to 1,3 mm	Valid for other types of flat or light profile
	Surface coating - tested face (see product description in §1b) a) PCS of the tested coating: 0,7 MJ/m ² b) Colour of tested coating: RAL 9002	Valid for all coatings in the range 0 to 4 MJ/m ² Valid for all colours
<u>Joint design</u>	Similar type of joint of the tested face with facings of the same profile – see Figure 3	Valid for similar types of overlapping joint where the metal overlapping tongue on the internal face is ≥ 15 mm
<u>Adhesive</u>	None	None
<u>Seals and gaskets</u>	Two different joint seals within 1 panel: 1) PU sealant: 0,0075 – 0,0078 MJ/mm width/m 2) PE sawtooth (matching form of tiles): PCS value not known	Valid only for the types of joint seals tested and for those of equal or lower PCS-value.
<u>Insulating core</u>	a) Chemical composition: PIR foam type JI50SA	Valid for the same chemical system and blowing agent
	b) Density: 40 kg/m ³ \pm 5 kg/m ³	Valid for 40 kg/m ³ \pm 15 %
<u>Thickness of panel (D)</u>	Tested thicknesses: 40 mm & 120 mm (thicknesses measured in accordance with § D.2.1 of EN 14509:2013)	Valid for thicknesses 40 mm & greater
<u>Orientation of panels</u>	Vertically tested	Valid for vertical and horizontal installed panels and ceiling applications
<u>Metal corner flashings</u>	<u>External flashing:</u> (D+50) mm x 50 mm x 0,50 mm (D = panel thickness) <u>Internal flashing:</u> 50 mm x 50 mm x 0,50 mm	Valid for end use flashings of same material as tested and of at least the same width and thickness
<u>Plastic corner flashings</u>	None	None
<u>Fixings for metal flashings</u>	Standard spacing is 400 mm	Valid for fixing spacing of 400 mm or less
<u>Protection of cut edges</u>	Without protection of cut edges	Valid with or without protective cut edges
<u>Seals</u>	None	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.

The classification assigned to the product in this report is appropriate to a Declaration of Performance (DoP) by the manufacturer within the context of System 3 of AVCP and CE marking under the Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products.

The manufacturer has made a declaration, which is held on file. This confirms that the product's 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 played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide evidence for the traceability of the samples tested.

PREPARED BY

APPROVED BY

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