



CERTIFICATE OF APPROVAL

No CF 5941

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

EURO PANEL PRODUCTS PVT LTD
702, Aravali Business Centre, Ramdas Sutrale Road, Borivali (W),
Mumbai- 400092

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT
"Eurobond FR A2"

TECHNICAL SCHEDULE
TS 20

**CLASSIFICATION OF REACTION
TO FIRE PERFORMANCE IN
ACCORDANCE WITH**

EN 13501-1: 2018 (Class A2-s1,d0)

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager



Issued: 18th March 2021
Frequency: Annually
Valid to: 17th March 2026





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This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

Approved Manufacturing Location

Euro Panel Products Pvt. Ltd, 124/4 Manekpur, Sanjan, Khattalwad, Tal-Umbergaon Dist-Valsad, Gujarat – 396120, India

Certification Evidence

This certificate relates to the reaction to fire classification of “Eurobond FR A2”, a family of PVDF coated flame retardant grade aluminium composite panels, in accordance with the procedures given in EN 13501-1:2018.

The certification is issued on the basis of:

- i) Initial type testing of sampled test specimens (detailed below). Sampling conducted by a representative of Warringtonfire Testing and Certification Limited on the 11th October 2019 and 1st October 2020.
- ii) Inspection and surveillance of factory production control conducted initially by a representative of Warringtonfire Testing and Certification Limited on the 11th October 2019.
- iii) Certification of Quality Management Systems to ISO 9001.
- iv) Audit testing at the frequency specified in Clause 8 of TS20.

The classification is only valid for the tested product composition and specimen configuration, as described below. The classification is valid for the following product parameters::

Product thickness	3mm and 4mm
Core thickness	2.5mm and 3mm
Product weight per unit area	From 6.25±0.2 to 8.6±0.2 kg/m ² - Dependant on thickness of core material.
Coating type	PVDF as described in description
Coating colours	Any colour
Aluminium coil thickness	0.25mm (3mm panel) or 0.5mm (4mm panel)
Aluminium coil type	AA 3003 H16
Core type	No variation allowed
Joints	No joints allowed
Product composition	No variation other than stated in description
Product construction	No variation other than stated in description

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A more detailed product description is given at the end of this document.

Initial Type Testing Evidence:

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Warringtonfire	Euro Panel Products PVT Ltd	Formal: WF 423068 (Issue 2), WF 423070 (Issue 2) Indicative: WF 423067 (Issue 2)	EN 13823: 2010 + A1: 2014
Warringtonfire	Euro Panel Products PVT Ltd	Indicative: WF 432521, WF 434431	EN 13823: 2020
Warringtonfire	Euro Panel Products PVT Ltd	Formal: WF 423073, WF 423074, WF 430861, WF 430862, WF 430863, WF 432165, WF 432166, WF 434432, WF 423077	EN ISO 1716: 2018
Warringtonfire	Euro Panel Products PVT Ltd	WF 434434, WF 435476	EN ISO 1716: 2018 Composite summary
Warringtonfire	Euro Panel Products PVT Ltd	WF 430318	EN 13501-1: 2018
Warringtonfire	Euro Panel Products PVT Ltd	WF 430319	EN 15725:2010 and EN/TS 15117:2005

Product performance:

Reaction to Fire Classification: A2-s1, d0 in accordance with EN 13501-1: 2018

Valid for construction applications installed with a minimum airspace of 40mm over any substrate with a density equal to or greater than 870kg/m^3 , having a minimum thickness of 12mm and a fire performance of A2-s1, d0 or better (excluding paper faced gypsum plasterboard).

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Test Evidence:

Test method & test number	Parameter	Reference	No. tests	Results	
				Continuous parameter - mean (m)	Compliance parameters
EN 13823	FIGRA _{0.2MJ}	WF 423068 (Issue 2)	3	0.00 W/s	Compliant
		WF 423070 (Issue 2)	3	0.00 W/s	
		WF 423067 (Issue 2)	1	0.00 W/s	
		WF 423521	1	0.00 W/s	
		WF 434431	1	0.00 W/s	
	FIGRA _{0.4MJ}	WF 423068 (Issue 2)	3	0.00 W/s	Compliant
		WF 423070 (Issue 2)	3	0.00 W/s	
		WF 423067 (Issue 2)	1	0.00 W/s	
		WF 423521	1	0.00 W/s	
		WF 434431	1	0.00 W/s	
	THR _{600s}	WF 423068 (Issue 2)	3	0.33 MJ	Compliant
		WF 423070 (Issue 2)	3	0.57 MJ	
		WF 423067 (Issue 2)	1	0.55 MJ	
		WF 423521	1	0.32 MJ	
		WF 434431	1	0.10 MJ	
	LFS	WF 423068 (Issue 2)	3	None	Compliant
		WF 423070 (Issue 2)	3	None	
		WF 423067 (Issue 2)	1	None	
		WF 423521	1	None	
		WF 434431	1	None	

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EN 13823 (Contd.)	SMOGRA	WF 423068 (Issue 2)	3	0.00 m ² s ²	Compliant
		WF 423070 (Issue 2)	3	0.00 m ² s ²	
		WF 423067 (Issue 2)	1	0.00 m ² s ²	
		WF 423521	1	0.00 m ² s ²	
		WF 434431	1	0.00 m ² s ²	
	TSP _{600s}	WF 423068 (Issue 2)	3	14.80 m ²	Compliant
		WF 423070 (Issue 2)	3	14.55 m ²	
		WF 423067 (Issue 2)	1	7.37 m ²	
		WF 423521	1	14.43 m ²	
		WF 434431	1	7.43 m ²	
EN ISO 1716 3 & 4mm products, PVDF coating all colours	External non-substantial coating – PCS (b) comprising:			0.6235 - 0.8126 MJ/m ²	-
	• Topcoat - PCS (b)	*Red	3	0.6188 MJ/m ² (17.6796 MJ/kg)	
		White	3	0.4517 MJ/m ² (12.9059 MJ/kg)	
		Black	3	0.4297 MJ/m ² (12.2779 MJ/kg)	
	• Primer - PCS (b)	PU primer	3	0.1938 MJ/m ² (16.1510 MJ/kg)	
	Aluminium - PCS (a)	Deemed to satisfy (0.00)		-	
	Adhesive – PCS (d)	55 microns	3	2.2318 MJ/m ² (44.6355 MJ/kg)	-

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EN ISO 1716 3 & 4mm products, PVDF coating all colours	Core - PCS (a)	3mm 4mm	3 3	2.5550 MJ/kg 2.5364 MJ/Kg	-
	Adhesive - PCS (d)	55 microns	3	2.2318 MJ/m ² (44.6355 MJ/kg)	-
	Aluminium - PCS (a)	Deemed to satisfy (0.00)			-
	Reverse coating - PCS (b)	Primer	3	0.1929 MJ/m ² (14.8369 MJ/kg)	-
	For the product as a whole PCS (e)	Summary result (3mm)*		2.8063 MJ/kg	-
	Summary result (4mm)*		2.3418 MJ/Kg		

* The red coloured topcoat was determined to produce the highest PCS value, and as a result the calculations for the product as a whole have been performed utilising these results (worst case).

Product description

General description		Polyvinyleidene fluoride (PVDF) coated A2 grade flame retardant aluminium composite panel
Product reference of overall composite		"Eurobond FR A2"
Name of manufacturer of overall composite		Euro Panel Products Pvt Ltd
Thickness of overall composite		3 ± 0.2mm and 4 ± 0.2mm
Weight per unit area of overall composite		6.25 ± 0.2kg/m ² and 8.6 ± 0.2kg/m ²
Coating	Generic type	Polyvinyleidene fluoride (PVDF)
	Product reference	"Polyvinyleidene Fluoride (PVDF)"
	Name of manufacturer	SHANGHAI HUAHAI LACQUER-MAKING CO.,LTD, CHINA
	Colour reference	Any colour
	Number of coats	One
	Application thickness per coat	18-20 microns
	Application rate	35g/m ²
	Density	1.8g/cm ³
	Application method	Roller coating
	Curing process per coat	Oven baking
Flame retardant details		See Note 1 below

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Primer	Generic type	Polyurethane primer
	Product reference	"PU Primer"
	Name of manufacturer	SHANGHAI HUAHAI LACQUER-MAKING CO.,LTD, CHINA
	Colour reference	"Yellow"
	Number of coats	One
	Application thickness per coat	8-10 microns
	Application rate	12g/m ²
	Density	1.3g/cm ³
	Application method	Roller coating
	Curing process per coat	Oven baking
	Flame retardant details	See Note 1 below
Aluminium	Generic type	Aluminium
	Product reference	"AA3003 H16"
	Detailed description / composition details	Al-98.321%, Si-0.0726%, Fe-0.4903%, Cu -0.0665%, Mn - 1.0182%, Mg -0.00363%, others
	Name of manufacturer	SHANDONG INNOVATIVE METAL CO.,LTD, CHINA
	Thickness	0.25mm (3mm panel) and 0.5mm (4mm panel)
	Weight per unit area	0.68kg/m ² (3mm panel) and 1.34kg/m ² (4mm panel)
	Flame retardant details	See Note 1 below
Adhesive film	Generic type	Bynel adhesive film of DuPont
	Product reference	"AFFRA2"
	Name of manufacturer	ECOPLAST, INDIA
	Colour reference	"Clear/Translucent"
	Thickness	55 microns
	Weight per unit area	50g/m ²
	Application method	Continuous thermal lamination
	Flame retardant details	See Note 1 below
	Curing process	Room temperature air cooling

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Core	Generic type	A2 grade core sheet
	Product reference	"A2 Sheet"
	Detailed description / composition details	CaCo ₃ (80%), SiO ₂ (10%), MDH (3%), ATH (2%), Others (5%)
	Name of manufacturer	Shandong Golden Sunshine Building Materials Co Ltd. China
	Thickness	2.5mm and 3mm
	Weight per unit area	4.9kg/m ² (3mm panel) and 5.95kg/m ² (4mm panel)
	Colour reference	"White"
	Trade name of flame retardant	"FR A2 Core Materials"
	Generic type of flame retardant	A2 grade FR materials
	Amount of flame retardant	>95%
Adhesive film	Generic type	Bynel adhesive film of DuPont
	Product reference	"AFFRA2"
	Name of manufacturer	ECOPLAST, INDIA
	Colour reference	"Clear/Translucent"
	Thickness	55 microns
	Weight per unit area	50g/m ²
	Application method	Continuous thermal lamination
	Flame retardant details	See Note 1 below
Aluminium	Curing process	Room temperature air cooling
	Generic type	Aluminium
	Product reference	"AA3003 H16"
	Detailed description / composition details	Al-96.7%, Si-0.6%, Fe-0.7%, Cu -0.05-0.2%, Mn - 1.0-1.5%, Zn-0.1%, Ti-0.03%,others
	Name of manufacturer	SHANDONG FUHAI INDUSTRY CO.,LTD, CHINA
	Thickness	0.25mm (3mm panel) and 0.5mm (4mm panel)
	Weight per unit area	0.67kg/m ² (3mm panel) and 1.33kg/m ² (4mm panel)
	Flame retardant details	See Note 1 below
Coating (reverse)	Generic type	Polyester
	Product reference	"Basic Polyester Primer Coat"
	Name of manufacturer	JIANGSU KFCC NEW MATERIALS CO.,LTD
	Colour reference	"RAL 7035 (Gloss 0-10%)"
	Number of coats	One
	Application thickness	8-10microns
	Application rate	13g/m ²
	Density	1.4g/cm ³
	Application method	Roller coating
	Curing process	Oven baking
	Flame retardant details	See Note 1 below

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Mounting and fixing	The specimen was tested with a 40mm ventilated cavity situated behind the reverse face and the calcium silicate substrate.
Brief description of manufacturing process	A2 core sheet is preheated continuously through a metal conveying oven to make it ready for lamination process. The top PVDF coated aluminium coil is also preheated and adhered with a special A2 adhesive film and similarly the bottom wash coated coil from bottom with same A2 adhesive film are prepared to be sandwiched with the hot A2 core sheet on first composite roller. The roller gap is set according the input core sheet thickness and finish A2 ACP thickness. The sheet is passed through rollers at elevated temperature and then through composite rollers to step down the heat and then cooled slowly. The Sheet is air cooled and protective film applied on coloured side and product marked for traceability. The sides are trimmed and finally cut to length as finished A2 aluminium composite panel.

Note 1: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

- 1. The performance relates only to the behaviour of the specimen of the product under the particular conditions of test. They are not intended to be the sole criterion for assessing the potential smoke obscuration or fire hazard of the product in use, nor do they reflect the actual behaviour of the product under real fire conditions.**
- 2. It is the responsibility of the user of the information contained within this document to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use of the product.**
- 3. The performance relates only to the specimens of the product in the form in which they were tested.**
- 4. The approval relates to on-going production. Panel product and/or its immediate packaging shall be identified with the certification mark including the certification number, and the manufacturer's name and the product name or code reference.**

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