

## EXTENDED APPLICATIONS REPORT (EXAP) FIRE REACTION

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TEST SPECIMEN	Type: WALLS AND CEILINGS COVERINGS Reference: "RANGE FBA1 NO FIRE FONDO PU TRANSPARENTE + FGA14X SERIE GLOSS ACABADO PU TRANSPARENTE NO FIRE "	
STANDARD	UNE-CEN/TS 15117:2009. Guidance on direct and extended application	
APPLICANT	IVM CHEMICALS SRL. DIVISION: MILESI VIALE DELLA STAZIONE, 3 27020 PARONA (PV) - ITALY	
DATE/S OF TEST	Reception of specimens: 11/07/23 and 31/08/23 Beginning of test: 17/07/2023 End of test: 05/10/2023	
AUTHORIZED SIGNATORIES		



A blue ink signature of Ms. Raquel Cánovas Ruiz, with the AIDIMME logo below it.

Signed.: Ms. Raquel Cánovas Ruiz  
Technician Fire Lab



A blue ink signature of Mr. Stephane García Malpartida, with the AIDIMME logo below it.

Signed.: Mr. Stephane García Malpartida  
Head of Section - Fire Laboratory

Document digitally signed by a legal electronic signature

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## 1. INTRODUCTION

This extended applications report concerns to the test results obtained in accordance with the test methods described in the following standards:

- **UNE-EN 13823:2021+A1:2023.** *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.*
- **UNE-EN ISO 11925-2:2021.** *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test.*
- **UNE-EN ISO 1716:2021.** *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value).*

The determination of the extended field of application of test results has been carried out in accordance with the rules and systematic established in the standards:

- **UNE-CEN/TS 15117:2009.** *Guidance on direct and extended application.*
- **UNE-EN 15725:2011/AC:2012.** *Extended application reports on the fire performance of construction products and building elements.*

## 2. DETAILS OF THE PRODUCT INVOLVED

### 2.1. Information of the product

- **Product family**  
Fire retardant application process of polyurethane nature
- **Intended use**  
Walls and ceilings coverings

### 2.2. Description and identification of the tested object by the company

Samples corresponding to a range of transparent varnishes applied on MDF board with a 19 mm thickness and a density of 760 Kg/m<sup>3</sup> (classified as B-s2,d0 according to UNE-EN 13501-1). The application process consists of two layers of 150 g/m<sup>2</sup> each one of product **FBA1 NO FIRE Fondo PU transparente**, catalysed 50% with FNB1 Hardener, presenting an approximate density of (1111 ± 0.01) Kg/m<sup>3</sup>, transparent and matte appearance, with a drying time between layers of the 24 hours. Subsequently, a layer of 120 g/m<sup>2</sup> of one of the transparent finishes included in the **FGA14X Gloss Serie Acabado PU Transparente NO FIRE**, catalysed 50% with FNB1 Hardener which has an approximate density of (1035 ± 0.01) Kg/m<sup>3</sup>.

Transparent finishes included in FGA14X Serie Gloss Acabado PU Transparente NO FIRE:

GLOSS DEGREE	REFERENCE
Serie 70 Gloss	FGA11 NO FIRE ACABADO PU TRANSP OP70 G
Serie 25 Gloss	FGA14 NO FIRE ACABADO PU TRANSP OP25 G
Serie 10 Gloss	FGA16 NO FIRE ACABADO PU TRANSP OP10 G

The reference characteristic values of the tested products are:

	Product 1	Product 2	Product 3
<b>Gloss</b>	70 Gloss finish (semi-gloss)	10 Gloss finish (matte)	Base + 70 Gloss finish (semi-gloss)

The main descriptive characteristics of the samples (gloss) have been supplied by the applicant

The comercial references according to the client are:

- “FGA11 NO FIRE ACABADO PU TRANSP OP70 G”  
(Ref. AIDIMME: 2307080-01)
- “FGA16 NO FIRE ACABADO PU TRANSP OP10 G”  
(Ref. AIDIMME: 2307080-02)
- “FBA1 NO FIRE FONDO PU TRANSPARENTE + FGA11 NO FIRE ACABADO PU TRANSP OP70 G”  
(Ref. AIDIMME: 2307080-03)

### 3. REPORTS AND TEST RESULTS ON WHICH THE REPORT ON THE EXTENDED FIELD OF APPLICATION IS SUPPORTED

Laboratory	Company/Customer	Test report reference	Date of issue	Test method
ENSATEC	IVM CHEMICALS SRL. DIVISION: MILESI	251.I.2311.063.ES.01	November 13 <sup>th</sup> 2023	UNE-EN 13823:2021+A1:2023
AIDIMME	IVM CHEMICALS SRL. DIVISION: MILESI	251.I.2311.063.ES.01	November 13 <sup>th</sup> 2023	UNE-EN ISO 11925- 2:2021
AIDIMME	IVM CHEMICALS SRL. DIVISION: MILESI	251.I.2311.063.ES.01	November 13 <sup>th</sup> 2023	UNE-EN ISO 1716:2021

## 4. TEST RESULTS

The following table shows the values on the parameters used as the basis for determining the field of application:

**Test method:** UNE-EN ISO 1716:2021

Indicative sample	Reference	PCS (MJ/Kg) Result
<b>Semi-gloss</b>	“FGA11 NO FIRE ACABADO PU TRANSP OP70 G” (Ref. AIDIMME: 2307080-01)	23,3
<b>Matte</b>	“FGA16 NO FIRE ACABADO PU TRANSP OP10 G” (Ref. AIDIMME: 2307080-02)	22,4

<sup>(1)</sup> the parameters that have special relevance in determining the fire behavior of the product are considered.

According to the results obtained, the most unfavorable product is the semi-gloss one. The complete test is carried out on this product to obtain the parameters used to establish the classification of the product range.

## 5. EXTENDED FIELD OF APPLICATION. PROCESS

### 5.1. Applied principles for the extension of the field of application

To determine the field of application of the test results, the following methodology has been used:

Method 1: Establish the influence of the variation of the product parameters and the end use condition as specified in:

- UNE-CEN/TS 15117- Annex A

The analysis of how each of the parameters considered can have an influence on the test results (according to the indicated standard), considers that the rest of the parameters remain constant.

### 5.2. Influence of the variation of the product parameters on the results

Parameter	Test standard*	Results variation rule standard	Standard
<b>Gloss</b>	UNE-EN ISO 1716:2021	A complete sample of each gloss is made. The SBI and little burner test of the worst result are carried out.	UNE-CEN/TS 15117:2009
	UNE-EN 13823:2021+A1:2023 and UNE-EN ISO 11925-2:2021	Full sample of worst result (base+ finish)	UNE-CEN/TS 15117:2009

\* Only reference is made to the test standard whose results show variation as a consequence of the variation of the parameter considered

### 5.3. Influence of the variation of the parameters of the final conditional of use

Parameter	Test standard*	Results variation rule standard	Standard
<b>Support</b>	UNE-EN 13823:2021+A1:2023 and UNE-EN ISO 11925-2:2021	Supports with density equal or higher to 570 Kg/m <sup>3</sup> with a minimum thickness of 19 mm and reaction to fire B-s2,d0 or better (according to EN 13501-1).	UNE-CEN/TS 15117:2009

## 6. EXTENDED FIELD OF APPLICATION OF TEST RESULTS

### 6.1. Product range

Hereafter it is shown the range of variation allowed for the different parameters of the product/end use conditions. Rest of parameters shall be kept as described in paragraph 2.2.

ALLOWED RANGE	
<b>Product type</b>	Fire retardant application process of polyurethane nature
<b>Support</b>	Supports with density equal or higher to 570 Kg/m <sup>3</sup> with a minimum thickness of 19 mm and reaction to fire B-s2,d0 or better (according to EN 13501-1).
<b>Gloss</b>	From 10 gloss (matte) up to 70 gloss (semi-gloss)

### 6.2. Fire behavior parameters of the product range

Test method	Parameter	Results	
		Average of continuous parameter (m)	Compliance with parameters
<b>UNE EN ISO 1716:21 (Gross heat)</b>  "FGA11 NO FIRE ACABADO PU TRANSP OP70 G"  Ref. AIDIMME : 2307080-01	PCS (MJ/Kg)	23.3	Compliant

Test method	Parameter	Results	
		Average of continuous parameter (m)	Compliance with parameters
<b>UNE EN ISO 1716:21 (Gross heat)</b>  “FGA16 NO FIRE ACABADO PU TRANSP OP10 G”  Ref. AIDIMME : 2307080-02	PCS (MJ/Kg)	22.4	Compliant

Test method	Parameter	Results	
		Average of continuous parameter (m)	Compliance with parameters
<b>UNE EN ISO 11925-2:2021 (Little burner)</b>  “FBA1 NO FIRE FONDO PU TRANSPARENTE + FGA11 NO FIRE ACABADO PU TRANSP OP70 G”  Ref. AIDIMME : 2307080-03	Fs ≤ 150mm	Not applicable	Compliant
	Ignition of the filter paper	Not applicable	Compliant
<b>UNE-EN 13823:2021+A1:2023 (SBI)</b>  “FBA1 NO FIRE FONDO PU TRANSPARENTE + FGA11 NO FIRE ACABADO PU TRANSP OP70 G”  Ref. AIDIMME : 2307080-03	FIGRA <sub>0,2MJ</sub> (W/s)	46.50	Compliant
	THR <sub>600s</sub> (MJ)	3.71	Compliant
	TSP <sub>600s</sub> (m <sup>2</sup> ) corrected	42.88	Compliant
	SMOGR <sub>A</sub> (m <sup>2</sup> /s <sup>2</sup> ) corrected	4.93	Compliant
	LFS (Y/N)	Not applicable	Compliant
	Falling of flaming droptles/particles (Y/N)	Not applicable	Compliant