

REACTION TO FIRE CLASSIFICATION REPORT No. RA07-0364 ACCORDING TO THE EUROPEAN STANDARD NF EN 13501-1+A1:2013

Provided the Ordinance from the Ministry of the interior, November 21, 2002 modified
Pilot laboratory approved by the Ministry of the Interior (Ordinance of February 5, 1959, modified)
Seule la version française fait foi
Only the French version is legally acceptable

Valid 5 years from December 08th, 2015

NF EN 14782:2006 "Self-supporting metal sheet for roofing, external cladding and internal lining -
Product specification and requirements"

NF EN 14783:2013 "Fully supported metal sheet and strip for roofing, external cladding and
internal lining - Product specification and requirements"

Owner:	AC&CS – CRM GROUP Allée de l’Innovation 1, B57 Quartier Polytech 3 4000 LIEGE BELGIUM
Commercial brand(s):	Granite PVDF 25 µm precoated sheet Granite PVDF 35 µm precoated sheet Granite® PVDF
Manufacturing unit(s):	The manufacturing units appear in the associated tests reports
Brief description:	Metal sheets (see detailed description in paragraph 2)
Date of issue:	December 08th, 2015

This classification report certifies only the characteristics of the object submitted for testing but does not prejudice the characteristics of similar products. So it does not constitute a product certification in the sense of Articles L 115-27 to L 115-33 and R 115-1 to R 115-3 of the Consumer Code.

If this report is being issued by e-mail and/or on an electronic medium, only the hard copy of the report signed by CSTB shall prevail in the event of a dispute.

The reproduction of this classification report is only authorised in its integral form.

It comprises 5 pages.

**Extension of the report RA07-0364 dated December 14th, 2010 for addition of
the product "Granite® PVDF".**

1. Introduction

This classification report defines the classification assigned to the above-mentioned product(s) in accordance with the procedures given in the NF EN 13501-1+A1:2013 standard.

2. Product description

Steel sheets coated on both sides as follows:

For the "Granite PVDF 25 µm precoated sheet" and "Granite PVDF 35 µm precoated sheet" references:

- On the external side: a polyester resin-based primer (5 or 15 µm thick) and a PVDF finishing paint (20 µm thick).
- On the reverse side: two polyester resin-based backcoats paints (5 + 7 µm thick).

Nominal thicknesses of the tested steel sheets: 0.62 mm and 1 mm.

Colours: various.

For the "Granite[®] PVDF" reference:

- On the external side: a polyurethane resin-based primer (10 µm thick), a PVDF finishing paint (20 µm thick) and a PVDF varnish (15 µm thick).
- On the reverse side: two polyester resin-based backcoats paints (6 + 9 µm thick).

Nominal thickness of the tested steel sheet: 0.56 mm.

Colours: various.

3. Tests reports and tests results in support of this classification

3.1 Tests reports

Name of laboratory	Name of sponsor	Test identification	Test report No.	Test method
CSTB	AC&CS – CRM GROUP Allée de l’Innovation 1, B57 Quartier Polytech 3 4000 LIEGE BELGIUM	ES541140663	RA15-0327	NF EN 13823+A1:2015 NF EN ISO 1716:2013
		ES541041018	RA07-0364	NF EN 13823:2002 NF EN ISO 1716:2002
		ES541041014	RA05-0254	NF EN ISO 1716:2002

3.2 Tests results

Test method	Product	Number of tests	Parameters	Results	
				Continuous parameters Mean values	Compliance parameters
NF EN 13823	Granite PVDF 35 µm	3	FIGRA _{0,2MJ} (W/s)	0.0	-
			FIGRA _{0,4MJ} (W/s)	0.0	-
			LFS	-	Not reached
			THR _{600s} (MJ)	0.5	-
			SMOGRA(m ² /s ²)	0.0	-
			TSP _{600s} (m ²)	19.1	-
			Flaming droplets or debris	-	None
NF EN 13823+A1	Granite® PVDF	3	FIGRA _{0,2MJ} (W/s)	1.7	-
			FIGRA _{0,4MJ} (W/s)	1.7	-
			LFS	-	Not reached
			THR _{600s} (MJ)	0.8	-
			SMOGRA(m ² /s ²)	0.0	-
			TSP _{600s} (m ²)	27.7	-
			Flaming droplets or debris	-	None

(-) means: not applicable

3.3 Additional tests

Test method	Product	Number of tests	Parameters	Results	
				Continuous parameters Mean values	Compliance parameters
NF EN 13823	Granite PVDF 25 µm	1	FIGRA _{0.2MJ} (W/s)	0.0	-
			FIGRA _{0.4MJ} (W/s)	0.0	-
			LFS	-	Not reached
			THR _{600s} (MJ)	0.5	-
			SMOGRA(m ² /s ²)	0.0	-
			TSP _{600s} (m ²)	17.3	-
			Flaming droplets or debris	-	None
NF EN 13823	Granite PVDF 25 µm	1	FIGRA _{0.2MJ} (W/s)	0.0	-
			FIGRA _{0.4MJ} (W/s)	0.0	-
			LFS	-	Not reached
			THR _{600s} (MJ)	0.2	-
			SMOGRA(m ² /s ²)	0.0	-
			TSP _{600s} (m ²)	15.9	-
			Flaming droplets or debris	-	None

Test method	Product	Number of tests	Parameters	Results	
				Continuous parameters Mean values	Compliance parameters
NF EN ISO 1716	External non-substantial component (external side - worst case)	3 (per component)	PCS (MJ/m ²)	1.5	-
	External non-substantial component (reverse side - worst case)		PCS (MJ/m ²)	0.4	-
	Whole product (worst case: Granite [®] PVDF)	-	PCS (MJ/kg)	0.4	-

(-) means: not applicable

4. Classification and direct field of application

4.1 Reference of the classification

This classification has been carried out in accordance with clause 11.8.2 of the NF EN 13501-1+A1:2013 standard.

4.2 Classification

Fire behaviour		Smoke production		Flaming droplets or debris
A1	-	Non applicable	,	Non applicable

Classification: A1

4.3 Field of application

This classification is valid for the following product parameters:

- Products described in paragraph 2.
- Any coating of the same type with a Gross Heat of Combustion per unit area $\leq 1.5 \text{ MJ/m}^2$ on the external side and $\leq 0.4 \text{ MJ/m}^2$ on the reverse side.
- A nominal thickness of the steel sheet $\geq 0.62 \text{ mm}$ for the « Granite PVDF 25 μm » and « Granite PVDF 35 μm » references.
- A nominal thickness of the steel sheet $\geq 0.56 \text{ mm}$ for the « Granite® PVDF » reference.
- Various colours.

This classification is valid for the following end use conditions:

- Without substrate or with any A1 or A2-s1,d0 class substrate with a density $\geq 652 \text{ kg/m}^3$.
- With an air gap $\geq 80 \text{ mm}$.

5. Limitations

The present document does not represent type approval or certification of the product.

Champs-sur-Marne, December 08th, 2015

The Report Writer



Benoit FOREST

The Head of Reaction to Fire Unit



Gildas CREACH

.....END OF THE CLASSIFICATION REPORT