

## **REACTION TO FIRE CLASSIFICATION REPORT** **No. RA10-0429** **ACCORDING TO THE EUROPEAN STANDARD** **NF EN 13501-1**

**Notification by the French Government to the European Commission under no 0679.**  
**Seule la version française fait foi.**  
**The french version is legally acceptable**

### **Product standard**

**NF EN 14509:** "Self-supporting double skin metal faced insulating panels -  
Factory made products - Specifications"

**Owner:** **JORIS IDE NV**  
**Division ISOMETALL**  
**Hille 174**  
**8750 ZWEVEZELE**  
**BELGIUM**

**Commercial brand(s):** **VULCASTEEL ROOF**  
**VULCASTEEL WALL**

**Manufacturing unit(s):** **ISOMETALL Division de JORIS IDE NV**  
**Zone Industrielle Dochamps**  
**6960 MANHAY**  
**BELGIUM**

**Brief description:** **Self-supporting double skin metal faced insulating panels**  
(see detailed description in paragraph 2)

**Date of issue:** **May 12<sup>th</sup>, 2011**

The indicated classification does not prejudice the conformity of marketed materials with the samples submitted to the tests and under no circumstances, this document should not be considered as type approval or certification of the product in the sense of the L 115-27 article of the consumption's code and of the law dated June 3<sup>rd</sup>, 1994.  
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.

**Modification of the document for addition of a polyurethane glue.**  
**The report RA10-0429 dated May 12<sup>th</sup>, 2011 cancels and replaces the report RA10-0429 dated December 23<sup>rd</sup>, 2010.**

## 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 standard.

## 2. Product description

Rigid panel consisting of a stone wool core (rock fibres bonded with a thermosetting resin) glued (2 bicomponent polyurethane glues can be used) between two precoated steel sheet facings.

The VULCASTEEL ROOF reference presents a corrugated steel sheet facing on the outside side.

Nominal thicknesses of the provided panels: 50 and 120 mm.

Nominal density of the stone wool:  $100 \pm 5 \text{ kg/m}^3$ .

Nominal thicknesses of the provided steel sheets: 0.5 mm (inside facing) and 0.63 mm (outside facing).

Finishing paint (inside facing): Granite standard (polyester) 15  $\mu\text{m}$ .

Finishing paint (outside facing): Granite standard (polyester) 25 and 35  $\mu\text{m}$ , Granite HDX (PUR) 60  $\mu\text{m}$ , PVDF 25 and 35  $\mu\text{m}$ .

Bicomponent polyurethane glues: Emfidur 50061 / Emfidur 521 or Kleiberit 577.0 / Kleiberit VP 9602/73.

Colour of the finishing paint: white.

## 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 Nos.	Test method
<b>CSTB</b>	<b>JORIS IDE NV</b> <b>Division ISOMETALL</b> <b>Hille 174</b> <b>8750 ZWEVEZELE</b> <b>BELGIUM</b>	<b>ES541090923</b>	RA10-0429	EN ISO 1716 EN 13823
<b>CSTB</b>	<b>ArcelorMittal</b> <b>Centre Industrie liège</b> <b>SSDC / Metalworking</b> <b>Bld de Colonster, B57</b> <b>4000 LIEGE</b> <b>BELGIUM</b>	<b>ES541041017</b> <b>ES541051109</b> <b>ES541041018</b>	RA08-0032 RA07-0394 RA07-0364	EN ISO 1716

**3.2 Tests results**

Test method	Product	Number of tests	Parameters	Results		
				Continuous parameter mean value	Compliance parameters	
EN 13823	VULCASTEEL WALL 50 mm thick	3	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-	
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-	
			LFS	-	<b>Not reached</b>	
				THR <sub>600s</sub> (MJ)	<b>0.6</b>	-
				SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-
				TSP <sub>600s</sub> (m <sup>2</sup> )	<b>20.0</b>	-
				Flaming droplets or debris	-	<b>None</b>
	VULCASTEEL WALL 120 mm thick	3	FIGRA <sub>0.2MJ</sub> (W/s)	<b>2.0</b>	-	
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>2.0</b>	-	
LFS			-	<b>Not reached</b>		
			THR <sub>600s</sub> (MJ)	<b>0.6</b>	-	
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-	
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>18.9</b>	-	
			Flaming droplets or debris	-	<b>None</b>	
VULCASTEEL ROOF 120 mm thick	1	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-		
		FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-		
		LFS	-	<b>Not reached</b>		
			THR <sub>600s</sub> (MJ)	<b>0.7</b>	-	
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-	
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>18.1</b>	-	
			Flaming droplets or debris	-	<b>None</b>	

**3.2 Tests results (continuation)**

Test method	Product	Number of tests	Parameters	Results	
				Continuous parameter mean value	Compliance parameters
EN ISO 1716	Internal substantial component (stone wool)	3	PCS (MJ/kg)	<b>1.1</b>	-
	Internal non substantial component (worst case: glue + backcoat associated with the PVDF lacquer)	3	PCS (MJ/m <sup>2</sup> )	<b>3.9</b>	-
	External non substantial component Inside facing (Granite standard 15 µm lacquer)	3	PCS (MJ/m <sup>2</sup> )	<b>0.5</b>	-
	External non substantial component Outside facing (worst case: Granite HDX (PUR) 60 µm lacquer)	3	PCS (MJ/m <sup>2</sup> )	<b>1.9</b>	-
	Whole product (worst case)	-	PCS (MJ/kg)	<b>1.0</b>	-

(-) 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 clauses 11.7.3, 11.9.2 and 11.10.1 of the NF EN 13501-1 standard.

**4.2 Classification**

Fire behaviour		Smoke production		Flaming droplets or debris
<b>A2</b>	-	<b>s1</b>	,	<b>d0</b>

**Classification: A2 - s1, d0**

**4.3 Field of application**

This classification is valid for the following product parameters:

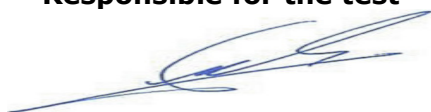
- The product described in paragraph 2.
- A range of overall nominal thicknesses from 50 to 200 mm.
- A range of nominal thicknesses of steel sheet from 0.5 mm to 1.0 mm for the internal facing and from 0.63 to 1.26 mm for the external facing.
- The following finishes:  
 Inside facing: Granite standard (polyester) 15 µm.  
 Outside facing: Granite standard (polyester) 25 and 35 µm, Granite HDX (PUR) 60 µm, PVDF 25 and 355 µm.
- A stone wool insulating core with a density of 100 kg/m<sup>3</sup> ± 15 %.
- A maximum quantity of bicomponent polyurethane glue "Emfidur 50061 / Emfidur 521" of 200 g/m<sup>2</sup>.
- A maximum quantity of bicomponent polyurethane glue "Kleiberit 577.0 / Kleiberit VP 9602/73" of 210 g/m<sup>2</sup>.

This classification is valid for the following end use conditions:

- With a minimum air gap of 40 mm.
- A fire on the inside side only.

Champs-sur-Marne, May 12<sup>th</sup>, 2011

**The Head of Reaction to Fire  
laboratory  
Responsible for the test**



**Gildas CREACH**

**The Head of Reaction to Fire activity**



**Martial BONHOMME**

.....END OF THE CLASSIFICATION REPORT