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#### Title:

Classification of Fire Resistance Performance in accordance with EN 13501-2: 2009 for Paroc Panel AST E

#### **WF Report No:**

152750 (Issue 4)

**Prepared for:** 

#### **Paroc Panel System Oy Ab**

Skräbbölentie 14-16 FI-21600 Parainen Finland

Date: 31<sup>st</sup> March 2006

#### 1. Introduction

This classification report defines the classification assigned to non-loadbearing wall constructions comprising Paroc Panel AST E, in accordance with the procedures given in EN 13501-2:2009.

#### 2. Details of classified product

#### 2.1 General

The element, Paroc Panel AST E, is defined as a non-loadbearing element (partition). Its function is to resist fire in respect of the fire performance characteristics given in Clause 5 of EN 13501-2:2009.

#### 2.2 **Product description**

The element, Paroc Panel AST E, is fully described in the test reports and Extended Field of Application report provided in support of this classification, which are listed in Clause 3.1.

Product description:

The product that is the subject of this report is a stone wool cored sandwich panel, faced with steel sheet (0.5 mm to 0.7 mm thick), as manufactured by Paroc Panel System Oy Ab, Skräbbölentie 14-16, FI-21600 Parainen, Finland, having a nominal thickness of 50, 80, 100, 120, 150, 175, 200 and 240 mm and a nominal density of 120 kg/m<sup>3</sup>.

The stone wool insulation was manufactured to the tolerances and specifications detailed in the formulation specification for the product having been produced at Paroc Oy Ab, Stone Wool Plant, FIN-21600 Pargas, Finland.

The product, Paroc Panel AST E, is fully described in the test reports provided in support of the classification listed in 3.1.

# 3. Test reports/extended application reports & test results in support of classification

## 3.1 Test reports/extended application reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
warringtonfire	Paroc Panel System Oy Ab	WF Test Report No. 146976	EN 1364-1:1999
warringtonfire	Paroc Panel System Oy Ab	WF Test Report No. 150108	EN 1364-1:1999
Instytut Techniki Budowlanej	Paroc Panel System Oy Ab	LP 706.2/05	EN 1364-1:1999
warringtonfire	Paroc Panel System Oy Ab	WF Report No. 152747	EN 15254-5: 2009, Extended application of results from fire resistance tests – Non- loadbearing walls – Part 5: Metal sandwich panel construction

## 3.2 Test results

Test method & Test number		Parameter	Results		
	Integrity	cotton pad	362 minutes*		
EN 1364-1:1999		gap gauges	362 minutes*		
WF Test Report No. 146976		sustained flaming	362 minutes*		
	Insulation	mean temperature rise	320 minutes		
		maximum temperature rise	286 minutes		
	Integrity	cotton pad	46 minutes		
EN 1364-1:1999		gap gauges	46 minutes		
WF Test Report No. 150108		sustained flaming	46 minutes		
	Insulation	mean temperature rise	46 minutes		
		maximum temperature rise	47 minutes		

Test method & Test number		Parameter	Results
EN 4074 4 4000	Integrity	cotton pad	133 minutes*
EN 1364-1:1999		gap gauges	133 minutes*
LP 706.2/05		sustained flaming	133 minutes*
	Insulation	mean temperature rise	133 minutes*
		maximum temperature rise	132 minutes*

\*test discontinued

## 4. Classification and field of application

## 4.1 Reference of classification

This classification has been carried out in accordance with Clause 7.5 of EN 13501-2:2009.

## 4.2 Classification

The element, Paroc Panel AST E is classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	-	М	С	S	IncSlow	sn	ef	r
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#### 4.2.1 50 mm Thickness



## 4.2.2 80 mm Thickness



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#### 4.2.3 100 mm Thickness

Fire resistance classifications:
EI 120
<i>EW 120</i>

## 4.2.4 120 mm Thickness

Fire resistance classifications: El 120 EW 120

## 4.2.5 150 mm Thickness

Fire resistance classifications:
EI 180
EW 120

## 4.2.6 175 mm Thickness



 $4.2.7 \geq 200 \text{ mm Thickness}$ 

Fire resistance classifications: El 240 EW 120

#### 4.3 Field of application

This classification is valid for the following end use applications:

• non-loadbearing fire separating wall

This classification is also valid for the following product variations in accordance with EN 1364-1:1999 and EN 15254-5: 2009, Extended application of results from fire resistance tests – Non-loadbearing walls – Part 5: Metal sandwich panel construction.

Parameter	Factors	EXAP Rules
Height	Unlimited decrease in height	5.3.1
	Increase in height (see limitations below*)	5.3.1
Width of Construction	Unlimited decrease and increase for vertically orientated panels	5.3.5
Thickness of wall and/or component materials	Unlimited increase, no decrease	5.3.2
Linear dimensions of panels	Unlimited decrease in panel width, increase up to + 20%	Table 2
Spacing of fixings	Unlimited decrease, no increase	Table 2

*Maximum Panel Spans									
Panel	Classification Period (minutes)								
Thickness	20	30	45	60	90	120	180	240	
50	4m	4m	4m	-	-	-	-	-	
80	4m	4m	4m	4m	4m	-	-	-	
100	12m	10.4m	10.4m	10.4m	10.4	4m	-	-	
120	12m	10.4m	10.4m	10.4m	10.4m	4m	-	-	
150	12m	10.4m	10.4m	10.4m	10.4m	4m	4m	-	
175	12m	10.4m	10.4m	10.4m	10.4m	4m	4m	4m	
≥ 200	12m	12m	12m	12m	12m	12m	12m	4m	

#### 5. Limitations

This classification document does not represent type approval or certification of the product.

#### SIGNED

**D. Hankinson** Principal Certification Engineer

## APPROVED

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**A. Kearns** Technical Manager

# Issue 2: Inclusion of 150 mm panel thickness (12<sup>th</sup> July 2006) Issue 3: Correction to 50 mm panel classification (25<sup>th</sup> July 2006) Issue 4: Changes to document due to update of WF Report No. 152747 (26<sup>th</sup> April 2010)

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