

## CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2007+A1:2009

<b>Sponsor</b>	Opstalan B.V. P.O. Box 3 NL-5060 AA OISTERWIJK The Netherlands
<b>Prepared by</b>	Efectis Nederland BV Lange Kleiweg 5 P.O. Box 1090 NL-2280 CB RIJSWIJK The Netherlands
<b>Notified Body no.</b>	1234
<b>Product name</b>	<b>PIR ASW-FR 30-80 insulation panel</b>
<b>Classification report no</b>	2011-Efectis-R1145
<b>Issue number</b>	1
<b>Date of issue</b>	December 2011
<b>Project number</b>	2011494

This classification report consists of five pages and may only be used in its entirety.

This report is issued by Efectis Nederland BV (previously TNO Centre for Fire Research). Efectis Nederland BV and her sister company Efectis France are full subsidiaries of Efectis Holding SAS since 1<sup>st</sup> January 2008, in which the Dutch TNO and the French CTICM participate. The activities of the TNO Centre for Fire Research were privatised in Efectis Nederland BV since 1<sup>st</sup> July 2006. This is in response to international developments and requests by customers. In order to be able to give a better answer to the customer's request and offer a more comprehensive service of high quality and a wider range of facilities, the international collaboration has been further expanded. This is done with highly experienced partners in fire safety in Norway (Sintef-NBL), Spain (Afti-Licof), Germany (IFT), USA (South West Research Institute) and China (TFRI). Further information can be found at our website.

## 1. Introduction

This classification report defines the classification assigned to **PIR ASW-FR 30-80 insulation panel** in accordance with the procedures given in EN 13501-1:2007+A1:2009.

## 2. Details of classified product

### 2.1 General

The product, **PIR ASW-FR 30-80 insulation panel**, is defined as a roof thermal insulation panel.

### 2.2 Product description

The product is composed of:

- Aluminium, thickness 50 µm;
- PIR insulation, thickness 30 - 80 mm;
- White lacquered aluminium, thickness 50 µm.

The product has a total thickness from 30 mm to 80 mm and a mass per unit area of approx. 1.1 to 2.8 kg/m<sup>2</sup>.

The joints in the insulation are filled with a white PVC-H-profile, types 10.230 to 10.280, supplied by CF-Sima kunststofprofielen  
(dimensions profile: 54/34 x 31 x 1.2 mm to 55/35 x 81 x 1.5 mm).

### 2.3 Manufacturer/Importer

Opstalan B.V.  
P.O. Box 3  
NL-5060 AA OISTERWIJK  
The Netherlands

## 3. Reports and results in support of this classification

### 3.1 Reports

Name of Laboratories	Name of sponsor	Report ref. no.	Test method
Efectis Nederland BV The Netherlands	Opstalan B.V. The Netherlands	2011-Efectis-R1143 2011-Efectis-R1144	EN ISO 11925-2:2010 EN 13823:2010

### 3.2 Test results

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – mean (m)	Compliance with parameters
EN 13823				
80 mm panel Without an air gap	FIGRA <sub>0.2MJ</sub> [W/s]	3	75	-
	FIGRA <sub>0.4MJ</sub> [W/s]		68	-
	THR <sub>600s</sub> [MJ]		4.2	-
	LFS < edge		-	Compliant
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		26.4	-
	TSP <sub>600s</sub> [m <sup>2</sup> ]		105	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		-	Compliant Compliant
30 mm panel With a 40 mm air gap	FIGRA <sub>0.2MJ</sub> [W/s]	1	65	-
	FIGRA <sub>0.4MJ</sub> [W/s]		48	-
	THR <sub>600s</sub> [MJ]		2.6	-
	LFS < edge		No	Compliant
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		23.1	-
	TSP <sub>600s</sub> [m <sup>2</sup> ]		75	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		No No	Compliant Compliant
30 mm panel Without an air gap	FIGRA <sub>0.2MJ</sub> [W/s]	1	92	-
	FIGRA <sub>0.4MJ</sub> [W/s]		63	-
	THR <sub>600s</sub> [MJ]		2.7	-
	LFS < edge		No	Compliant
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		30.7	-
	TSP <sub>600s</sub> [m <sup>2</sup> ]		80	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		No No	Compliant Compliant
EN-ISO 11925-2				
surface flame impingement	Fs ≤ 150 mm	6	27	-
	Ignition of filter paper		-	Compliant
edge flame impingement	Fs ≤ 150 mm	6	56	-
	Ignition of filter paper		-	Compliant
Side flame impingement	Fs ≤ 150 mm	6	90	-
	Ignition of filter paper		-	Compliant

#### 4. Classification and field of application

##### 4.1 Reference of classification

This classification has been carried out in accordance with clause 11 of EN 13501-1:2007+ A1:2009.

##### 4.2 Classification

The product, **PIR ASW-FR 30-80 insulation panel**, in relation to its reaction to fire behaviour is classified:

**B**

The additional classification in relation to smoke production is:

**s2**

The additional classification in relation to flaming droplets / particles is:

**d0**

**Reaction to fire classification: B - s2, d0**

##### 4.3 Field of application

This classification is valid for the following product parameters:

- |                   |                              |
|-------------------|------------------------------|
| - Thickness       | 30 - 80 mm                   |
| - Surface density | 1.1 to 2.8 kg/m <sup>2</sup> |

This classification is valid for the following end use applications:

- |                               |  |
|-------------------------------|--|
| - Air gap                     | without and with non ventilated air gap  |
| - Methods and means of fixing | Mechanically   |
| - Joints                      | Vertically, white PVC-H-profiles shall be applied, supplied by CF-Sima kunststofprofielen, dimensions: 54/34 x 31 x 1.2 mm to 55/35 x 81 x 1.5 mm, types 10.230 to 10.280, |
| Corner Joint                  | Protected by a steel angle profile 40 x 40 x 4 mm  |

##### 4.4 Duration of the validity of this classification report

There are no limitations in time on the validity of this report.

## 5. Limitations

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



C.C.M. Steinhage B.Sc.



S.D. Nieuwendijk M.Sc.

This report is issued by Efectis Nederland BV (previously TNO Centre for Fire Research). Efectis Nederland BV and her sister company Efectis France are full subsidiaries of Efectis Holding SAS since 1<sup>st</sup> January 2008, in which the Dutch TNO and the French CTICM participate. The activities of the TNO Centre for Fire Research were privatised in Efectis Nederland BV since 1<sup>st</sup> July 2006. This is in response to international developments and requests by customers. In order to be able to give a better answer to the customer's request and offer a more comprehensive service of high quality and a wider range of facilities, the international collaboration has been further expanded. This is done with highly experienced partners in fire safety in Norway (Sintef-NBL), Spain (Afiti-Licof), Germany (IFT), USA (South West Research Institute) and China (TFRI). Further information can be found at our website.