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**2008-Effectis-R0291**

Reaction to fire testing of  
Sonaspray K 13 st - sp - FC - FCX,  
according to EN ISO 11925-2:2002

The European experts in fire safety

**Efectis Nederland report**

**2008-Efectis-R0291**

Reaction to fire testing of  
Sonaspray K 13 st - sp - FC - FCX,  
according to EN ISO 11925-2:2002

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Date	April 2008
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Sponsor	Asona Benelux BV P.O. Box 9057 NL-1180 MB AMSTELVEEN The Netherlands
Project number	2008718
Number of pages	3



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**Product identification:**

**Sonaspray K 13 st - sp - FC - FCX**, further referred to as 'the product'.

**Abstract:**

Twelve specimens of the product were subjected to direct impingement of a small flame according to EN ISO 11925-2:2002.

**Intended application:**

The product will be used as a wall, facade or ceiling covering.

**Manufacturer/importer:**

Asona Benelux BV  
P.O. Box 9057  
NL-1180 MB AMSTELVEEN  
The Netherlands

**Product description:**

According to the sponsor the product is composed of:

- Cellulose from recycled paper with an addition of Borax salts, to provide the product with fire resistant properties.
- The Sonaspray is applied by spraying with a mix of 80% water and 20% adhesive.  
The adhesive is a copolymer with a small addition of Poly Vinyl Alcohol.
- The thickness of the sprayed layer is approx. 20 mm, with a surface density of 2.75 kg/m<sup>2</sup>.

**Samples:**

Sampling procedure:	The samples were prepared and sent in by the sponsor.
Age:	At the time of receipt: approx. 6 weeks. At the start of the examinations: 2 weeks.
Date of receipt:	April 8, 2008

**Specimen preparation:**

Substrates used:	Paper faced plasterboard, thickness 12 mm
Method of fixing:	Spraying
Conditioning:	Prior to the examinations, the specimens were conditioned over a period of 2 weeks at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) %, according to § 4.1 of EN 13238:2001.

**Examination:**

Number of tests:	A total of twelve single ignitability tests were carried out according to EN 11925-2:2002
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Deviations from the test method: None

Harmonised Product Standard:	At the time of examination of the product, the sponsor was not aware of a related existing Harmonised Product Standard.
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The results are given in Table 1.

**Date of examination:**  
April 25, 2008

Table 1: Ignitability classification parameter results

Flame application time: 30 s					
	Ignition of sample	Maximum flame height	t <sub>150</sub>	Afterburning time	Ignition of filter paper
Sample	{Y=Yes/N=No}	[mm]	[s]	[s]	{Y=Yes/N=No}
Surface ignition					
1	N	55	∞ not reached	0	N
2	N	60		0	N
3	N	55		0	N
4	N	55		0	N
5	N	60		0	N
6	N	65		0	N
Classification parameters		150 mm not reached within 60 s			N
Edge ignition					
1	N	35	∞ not reached	0	N
2	N	40		0	N
3	N	50		0	N
4	N	45		0	N
5	N	50		0	N
6	N	50		0	N
Classification parameters		150 mm not reached within 60 s			N

*Observations of physical behaviour of the test specimen:*

The material did not shrink and melt away from the flame without ignition. Applying the testing protocol as specified in Annex A of the standard was therefore not necessary.

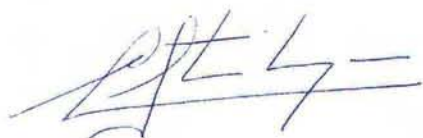
**Conclusions:**

A formal classification is to be assessed in accordance with EN 13501-1, "Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests".

**Remarks:**

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Regarding the precision of the test method, following Annex B of EN 11925-2 the absolute repeatability/reproducibility for this test method is estimated to lie within 3 s to 5 s for all times measured.



Ing. C.C.M. Steinhage



W. Langstraat

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2008-Efectis-R0292

Reaction to fire testing of  
Sonaspray K 13 st - sp - FC - FCX,  
according to EN 13823:2002

The European experts in fire safety

Partners of Efectis: CTICM - France / TNO - The Netherlands / SINTEF NBL as - Norway

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**Efectis Nederland report**

**2008-Efectis-R0292**

Reaction to fire testing of  
Sonaspray K 13 st - sp - FC - FCX,  
according to EN 13823:2002

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**Product identification:**

**Sonaspray K 13 st - sp - FC - FCX**, further referred to as 'the product'.

**Abstract:**

Three specimen of the product were subjected to a Single Burning Item according to EN 13823:2002.

**Intended application:**

The product will be used as a wall, facade or ceiling covering.

**Manufacturer/importer:**

Asona Benelux BV  
P.O. Box 9057  
NL-1180 MB AMSTELVEEN  
The Netherlands

**Product description:**

According to the sponsor the product is composed of:

- Cellulose from recycled paper with an addition of Borax salts, to provide the product with fire resistant properties.
- The Sonaspray is applied by spraying with a mix of 80% water and 20% adhesive.  
The adhesive is a copolymer with a small addition of Poly Vinyl Alcohol.
- The thickness of the sprayed layer is approx. 20 mm, with a surface density of 2.75 kg/m<sup>2</sup>.

**Samples:**

Sampling procedure: The samples were prepared and sent in by the sponsor.

Age: At the time of receipt: approx. 6 weeks.  
At the start of the examinations: 2 weeks.

Date of receipt: April 8, 2008

**Specimen preparation:**

Substrates used: Paper faced plasterboard, thickness 12 mm

Method of mounting and fixing: The specimens were placed directly against the backing board.

Conditioning: Prior to the examinations, the specimens were conditioned over a period of 2 weeks at a temperature of  $(23 \pm 2)$  °C and a relative humidity of  $(50 \pm 5)$  %, according to § 4.1 of EN 13238:2001.

**Examination:**

Number of tests: A total of three Single Burning Item tests were carried out, all in accordance with EN 13823:2002.

Deviations from the test method: None

Harmonised Product Standard: At the time of examination of the product, the sponsor was not aware of a related existing Harmonised Product Standard.

The results are given in Table 1.

**Dates of examination:**

April 21 and April 23, 2008

Table 1: Single Burning Item classification parameter results

Test number	1	2	3	Classification parameter
Test parameter				
FIGRA Threshold: 0.2 MJ [W/s]	106.4	95.5	134.3	<b>112.1</b>
FIGRA Threshold: 0.4 MJ [W/s]	77.4	67.5	89.4	<b>78.1</b>
THR <sub>600</sub> [MJ]	4.0	4.2	3.9	<b>4.0</b>
Lateral flame spread (LFS) to the edge of the long wing specimen {Y=Yes, N=No}	N	N	N	<b>N</b>
SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]	12.5	14.6	11.9	<b>13.0</b>
TSP <sub>600</sub> [m <sup>2</sup> ]	69.7	71.3	70.7	<b>70.6</b>
Flaming droplets/particles (flaming ≤ 10 s) {Y=Yes, N=No}	N	N	N	<b>N</b>
Flaming droplets/particles (flaming > 10 s) {Y=Yes, N=No}	N	N	N	<b>N</b>

*Observations of physical behaviour of the test specimen:* None

### Conclusions:

A formal classification is to be assessed in accordance with EN 13501-1, "Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests".

Graphs of Rate of Heat Release (HRRav(t)), Rate of Smoke Production (SPRav), Total Heat release (THRa), Total Smoke Production (TSPta), FIGRA and SMOGRA, are presented hereafter followed by some photographs of the test setup and test result.

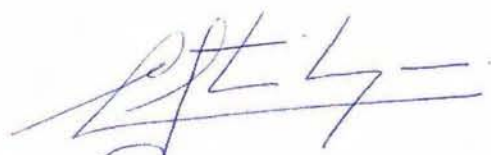
### Remarks:

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Regarding the estimated precision of the test method, the following information is given in Annex B of EN 13823:

Table B.2 — Average relative standard deviations

	FIGRA <sub>0,2MJ</sub>	FIGRA <sub>0,4MJ</sub>	THR <sub>600s</sub>	SMOGRA	TSP <sub>600s</sub>
Average ( s <sub>r</sub> /m)	14 %	15 %	11 %	15 %	18 %
Average ( s <sub>k</sub> /m)	23 %	25 %	21 %	40 %	44 %

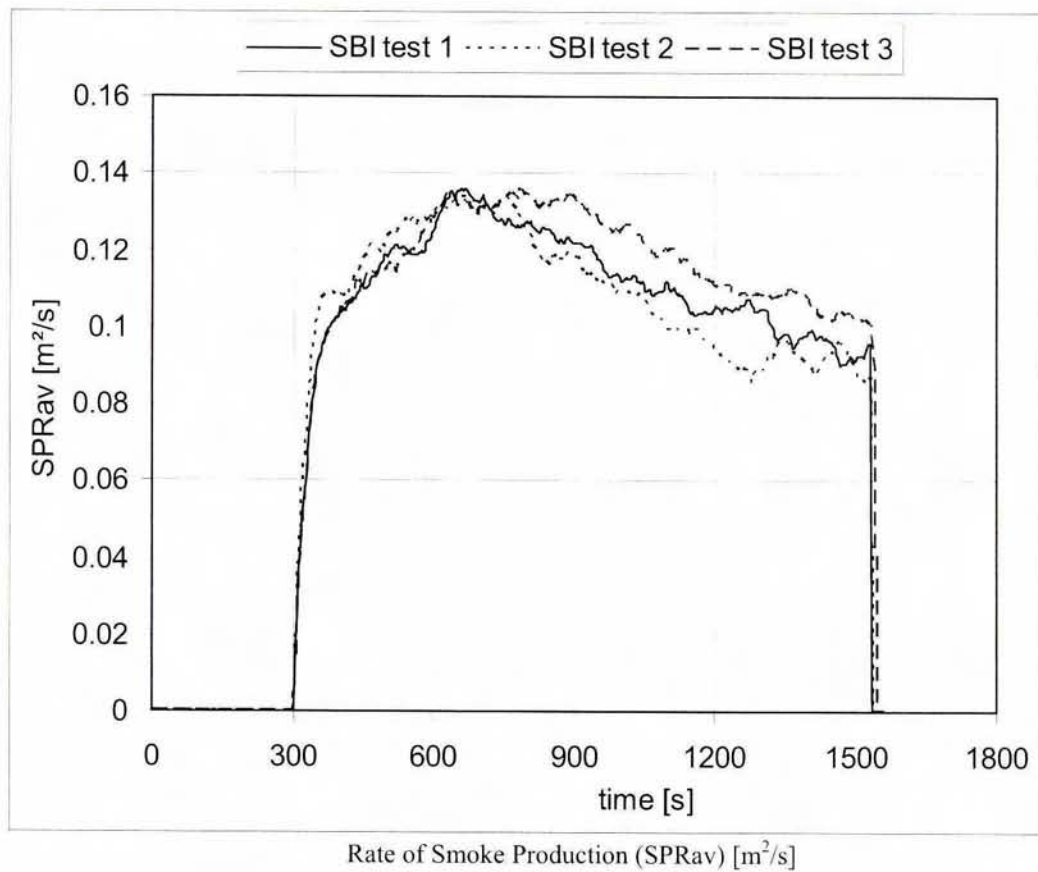
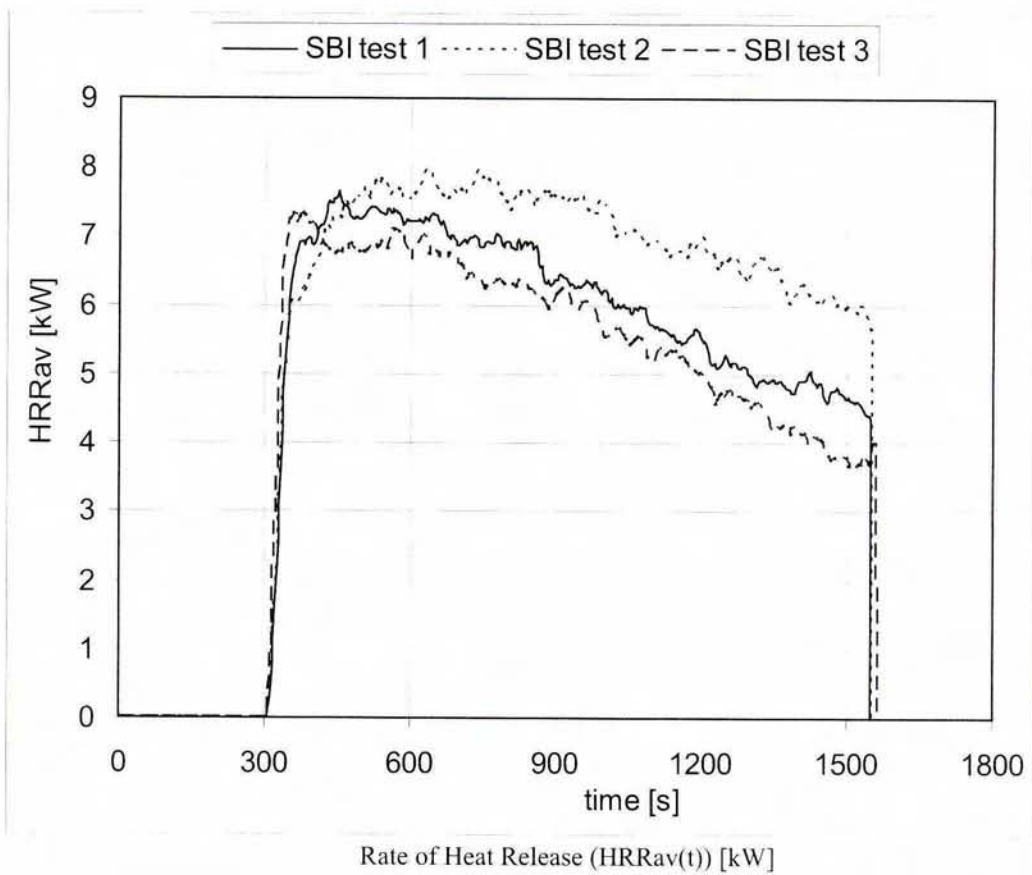


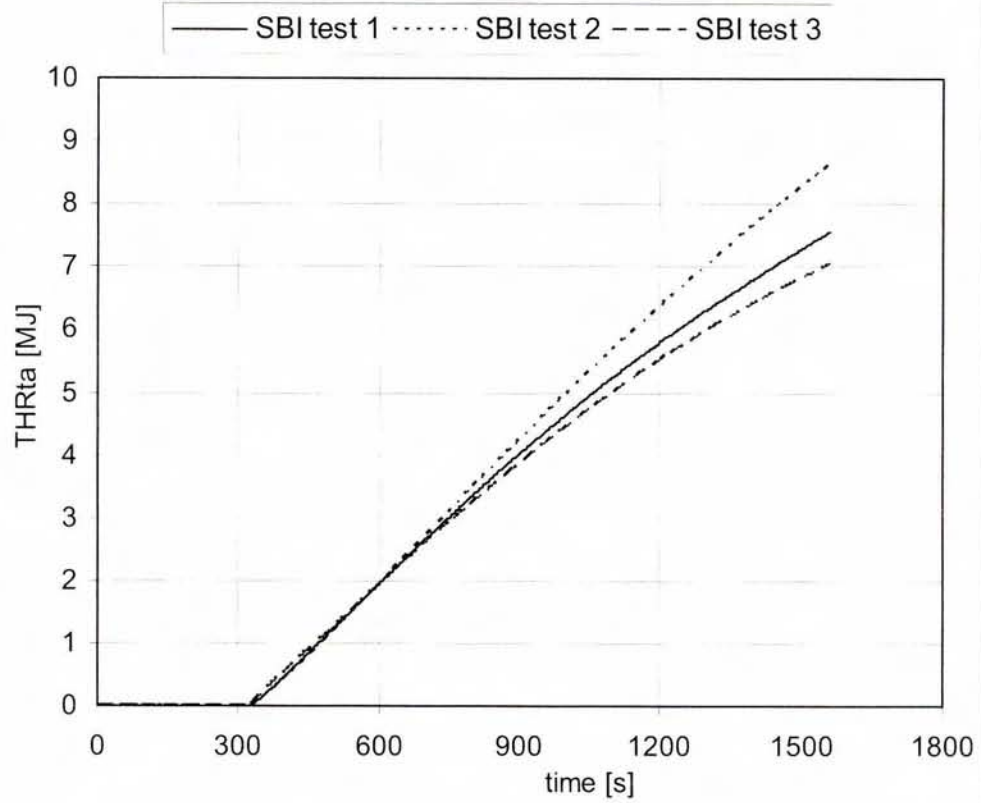
Ing. C.C.M. Steinhage



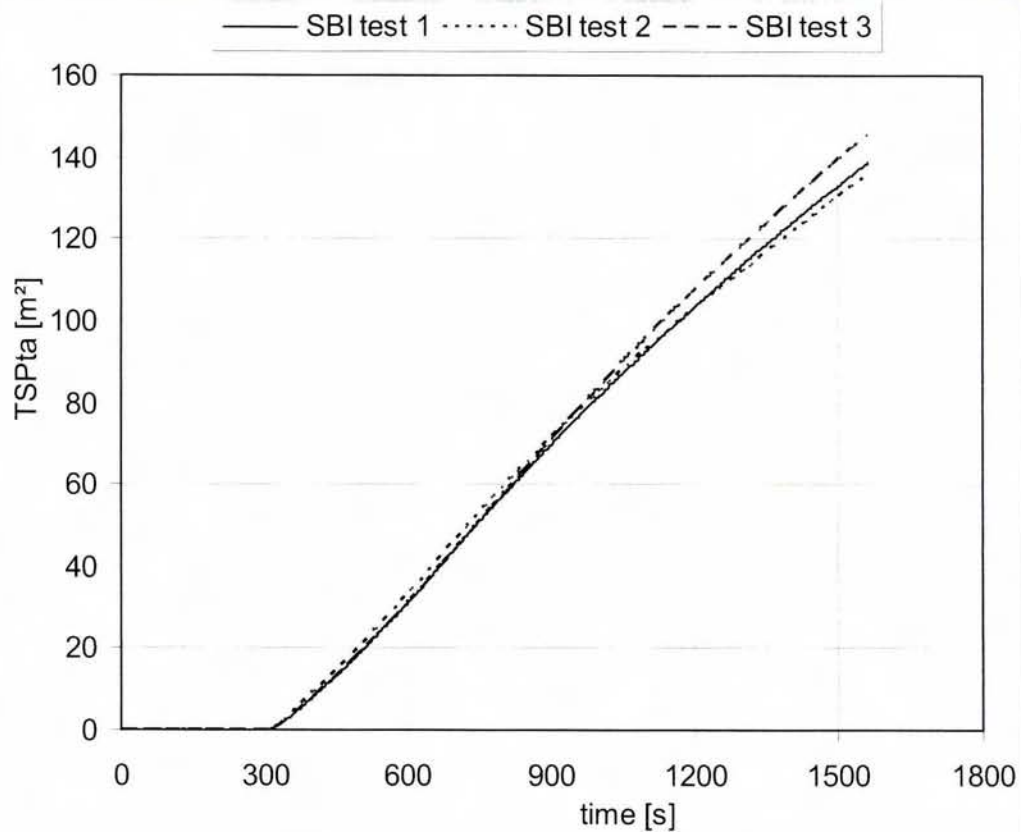
W. Langstraat

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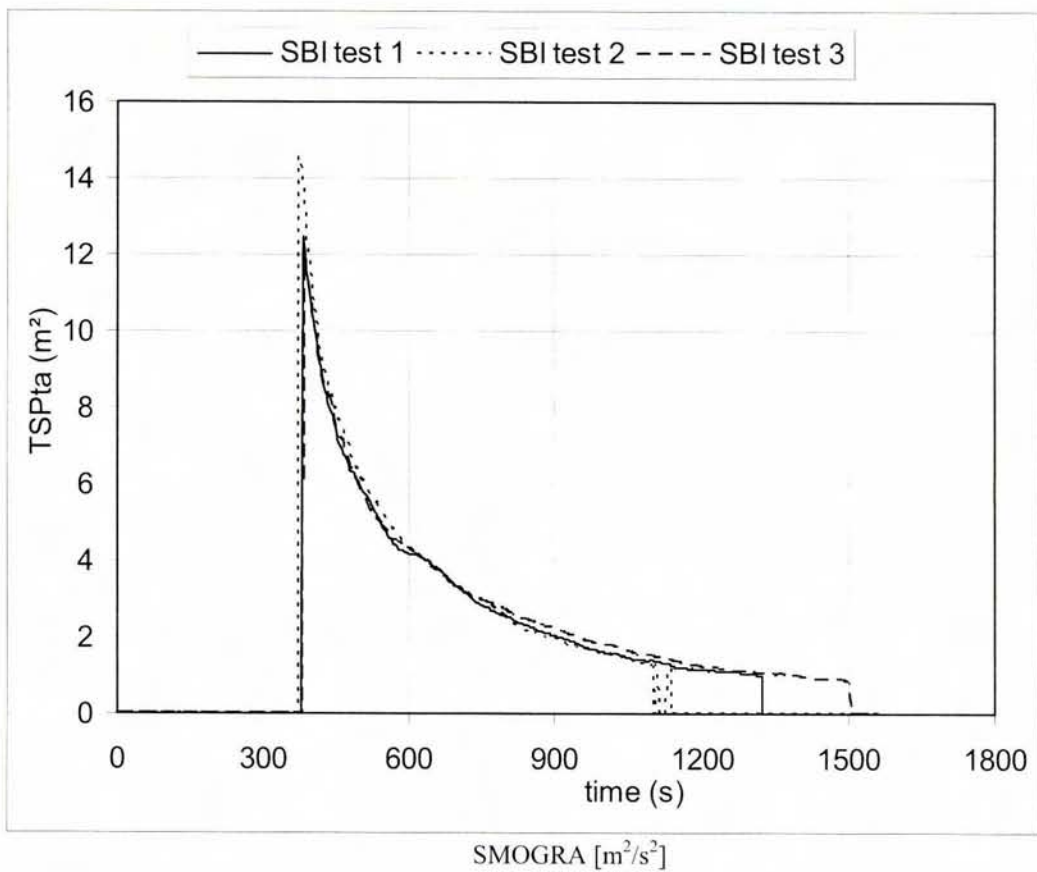
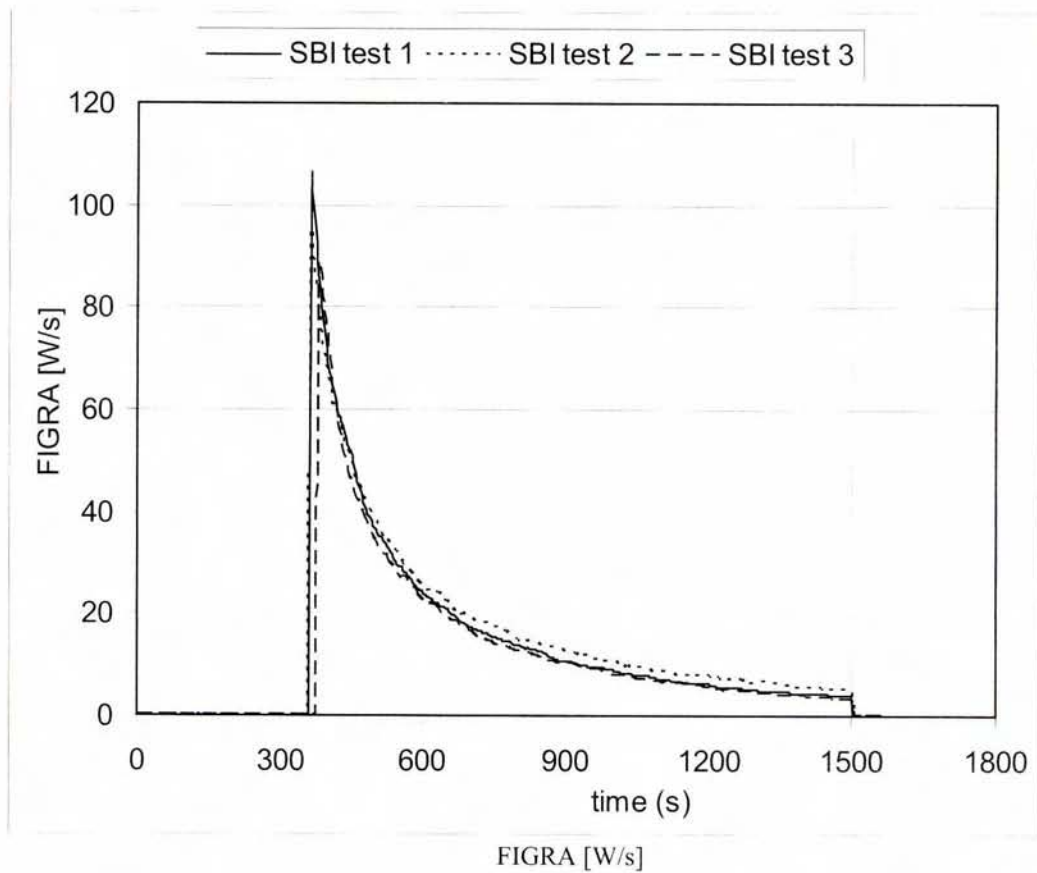




Total Heat release (THRa) [MJ]



Total Smoke Production (TSPta) [m²]





Specimen 1 prior to the test



Specimen 1 after the test

Photographs of the SBI test 1

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

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<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>	Sonaspray K 13 st - sp - FC - FCX
<b>Classification report no</b>	2008-Efectis-R0293
<b>Issue number</b>	1
<b>Date of issue</b>	April 2008
<b>Project number</b>	2008718

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

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## 1. Introduction

This classification report defines the classification assigned to **Sonaspray K 13 st - sp - FC - FCX** in accordance with the procedures given in EN 13501-1: 2007.

## 2. Details of classified product

### 2.1 General

The product, Sonaspray K 13 st - sp - FC - FCX, is defined as a type of product according to relevant European Technical Specification (to be used for CE marking)

### 2.2 Product description

According to the sponsor the product is composed of:

- Cellulose from recycled paper with an addition of Borax salts, to provide the product with fire resistant properties.
- The Sonaspray is applied by spraying with a mix of 80% water and 20% adhesive. The adhesive is a copolymer with a small addition of Poly Vinyl Alcohol.
- The thickness of the sprayed layer is approx. 20 mm, with a surface density of 2.75 kg/m<sup>2</sup>.

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

### 3.1 Test reports

Name of Laboratories	Name of sponsor	Test reports	Test method
Efectis Nederland B.V., The Netherlands	Asona BeneluxBV, The Netherlands	2008-Efectis-R0291 2008-Efectis-R0292	EN ISO 11925-2:2002 EN 13823:2002

### 3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN 13823	FIGRA <sub>0.2MJ</sub>	3	112.1 W/s	-
	FIGRA <sub>0.4MJ</sub>		78.1 W/s	-
	THR <sub>600s</sub>		4.0 MJ	-
	LFS < edge		-	Compliant
	SMOGRA		13.0 m <sup>2</sup> /s <sup>2</sup>	-
	TSP <sub>600s</sub>		70.6 m <sup>2</sup>	-
	Flaming debris		-	Compliant
EN-ISO 11925-2 surface flame impingement	Fs ≤150 mm	6	-	Compliant
	Ignition of filter paper		-	Compliant
EN-ISO 11925-2 edge flame impingement	Fs ≤150 mm	6	-	Compliant
	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 (excluding floorings) of NEN-EN 13501-1:2007

### 4.2 Classification

The product, **Sonaspray K 13 st - sp - FC - FCX**, 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 approx. 20 mm
- Surface density 2.75 kg/m<sup>2</sup>

This classification is valid for the following end use applications:

- Substrate non-combustable (class A1/A2, according to EN 13501-1)
- Air gap no air gap
- Methods and means of fixing spraying
- End use condition the product will be used as a wall, facade or ceiling covering.

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

There are no limitations in time on the validity of this report. It is however strongly recommended to reconsider the content of this report after a period of maximum five years.

## 5. Limitations

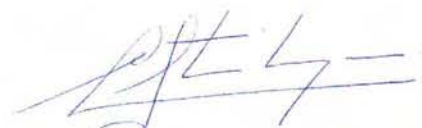
This classification document does not represent type approval or certification of the product.

The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive.

The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.

Signed



Ing. C.C.M. Steinhage

Approved



W. Langstraat