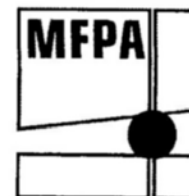


**MFPA Leipzig GmbH**  
Prüf-, Überwachungs- und  
Zertifizierungsstelle nach  
Landesbauordnung (SAC 02)



**Bereich III**  
**Bauphysik/Baulicher Brandchutz**  
Geschäftsführer:  
Dipl.-Phys. Ingolf Kotthoff  
Prüfstelle Brandverhalten von Baustoffen

## Test report

**Nr. PZ III/B-03-153**

**November 4th, 2003, 4. Issuing**

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Applicant: Asona Benelux b.v.  
De Warren 6, post-box 9057  
1180 MB Amstelveen  
The Netherlands

Matter: Flammability test (Baustoffklasse B1)  
according to DIN 4102 Part 1, Issue of May 1998

Subject: Acoustical plaster SONASPRAY K-13, special, FC

Application date: September 20, 2003      Sign: RH10666      Reception: October 8, 2003

Sample reception: October 8, 2003

Sample taken by: Customer

Marking: none

Testing date: October 23rd, 2003 (fire shaft)  
October 29, 2003 (fire case)

This test report consists of 6 text pages and 4 annexes.

In the construction supervision process, this test reports acts as a basis for the stipulated usability certificates and does not replace the general construction supervision test report.  
This test report may be duplicated only in its entirety. A publication - even in part - requires the prior written authorization of the MFPA Leipzig GmbH.

## 1 Description of the material

According to the applicant, the construction product to be tested is a coating of cellulose fibers called acoustical plaster SONASPRAY K-13, special, FC. According to the applicants, the construction product is applied to room boundary surfaces in order to reduce reverberation times.

The material was applied to gypsum cardboard boards.

The colour of the material was grey.

## 2 Production of the samples

The applicant provided the samples for the testing in the fire shaft and the fire case true to size:

- 12 samples of a length of approximately 1000 mm x a width of approximately 190 mm x sample thickness,
- 5 samples of a length of approximately 190 mm x a width of approximately 90 mm x sample thickness.

## 3 Material specifications

Specifications according to the applicant: none;

Specifications determined by MFPA Leipzig:

Thickness of gypsum boards:	approx. 10 mm
Thickness of coating:	approx. 22 mm
Thickness of fire shaft samples:	approx. 32 mm
Surface mass of the fire shaft samples:	approx. 12,8 kg/m <sup>2</sup>

## 4 Test procedure

The tests are done in accordance with DIN 4102 Part 1 (Issue of May 1998), DIN 4102 Part 15 (Issue of May 1990) and DIN 4102 Part 16 (Issue Mai 1998).

The fire shaft and fire case tests with the above-mentioned construction product were respectively conducted with a freely suspended sample arrangement.

## 5 Test results

The test results are summarized in the following tables 1 and 2.

**Table 1: Test in fire shaft according to DIN 4102 Part 1, Section 6.1**

Acoustical plaster SONASPRAY K-13, special, FC, applied to gypsum boards, sample thickness approx. 32 mm, surface mass approx. 12.8 kg/m<sup>2</sup>;

Test body A: Freely suspended sample arrangement,

Test body B: Freely suspended sample arrangement,

Test body C: Freely suspended sample arrangement

Line-Nr.	Measurements for test body					
	A	B	C	-		
1	<u>Nr. of sample arrangement</u> According to DIN 4102 Part 15 Table 1	2	2	2	-	
2	<u>Maximum flame height</u> over sample lower border	cm	75	70	70	-
3	Time*)	min:s	1:00	1:15	1:45	-
4	<u>Melting through/Burning through</u> Time*)	min:s	./.	./.	./.	-
5	<u>Observations on the sample back side</u> Flaming/smouldering Time*)	min:s	./.	./.	./.	-
6	Discolouration Time*)	min:s	./.	./.	./.	-
7	<u>Burning dripping</u> Begin*)	min:s	./.	./.	./.	-
8	<u>Extent:</u> Sporadically dripping sample material		-	-	-	-
9	Constantly dripping sample material		-	-	-	-
10	<u>Burning falling sample parts</u> Begin*)	min:s	./.	./.	./.	-
11	<u>Extent:</u> sporadically falling sample parts		-	-	-	-
12	Constantly falling sample parts		-	-	-	-
13	<u>Duration of further burning on the sieve floor (max.)</u>	min:s	-	-	-	-
14	<u>Disturbance of burner flame by dripping/falling parts</u> Time*)	min:s	./.	./.	./.	-
15	<u>Premature test stop</u> End of burning on the samples*)	min:s	./.	./.	./.	-
16	Time of any test cancellation *)	min:s	./.	./.	./.	-

\*) Time starting with the beginning of the test

./. Event did not occur

- no data

Continuation of Table 1:

Line-Nr.	Measurements for test body					
	A	B	C	-		
<u>Afterburning after end of test</u>						
17	Duration	min:s	./.	./.	./.	-
18	Number of samples		-	-	-	-
19	Sample front side		-	-	-	-
20	Sample backside		-	-	-	-
21	Flame length	cm	-	-	-	-
<u>Smouldering after end of test</u>						
22	Duration	min:s	./.	120:00	./.	-
23	Number of samples		-	3	-	-
Location of occurrence						
24	Lower half of sample		-	no	-	-
25	Upper half of sample		-	yes	-	-
26	Sample front side		-	yes	-	-
27	Sample backside		-	no	-	-
<u>Smoke density</u>						
28	Max. 400 % min	%min	22	22	29	-
29	> 400 % min (very strong smoke generation)	%min	./.	./.	./.	-
30	Diagram in annex Nr.		2	3	4	-
<u>Rest lengths</u>						
31	Individual values	cm	22; 23 22; 23	11; 22 20; 14	23; 24 22; 22	-
32	Average	cm	22	17	23	-
33	Photo of sample in annex Nr.		-	1	-	-
<u>Flue gas temperature</u>						
34	Maximum of mean value	°C	116	119	114	-
35	Time*)	min:s	8:42	9:10	8:58	-
36	Diagram in annex Nr.		2	3	4	-
37	<u>Comments:</u> - none;					

\*) Time starting with the beginning of the test

./. Event did not occur

- No data

**Table 2: Test in fire case according to DIN 4102 Part 1, Section 6.2 (Edge flaming)**

Acoustical plaster SONASPRAY K-13, special, FC, applies to gypsum boards,  
Sample thickness approx 36 mm, surface mass approx. 12.8 kg/m<sup>2</sup>;

Freely suspended sample arrangement;

Data according to DIN 4102 Part 1		Test results Sample Nr.					
		1	2	3	4	5	-
Flaming	s	2	3	2	2	1	-
Greatest flame height	mm	35	25	25	20	30	-
Time of occurrence	s	10	12	10	10	14	-
Flame peak at measurement mark	s	./.	./.	./.	./.	./.	-
Extinction of flame before reaching measurement mark	s	15	15	15	15	15	-
Further burning after the end of the test	s	./.	./.	./.	./.	./.	-
Ignition of filter paper	s	./.	./.	./.	./.	./.	-
<p>Appearance of the samples after the burning tests:</p> <p>The samples were damaged on a length of max. 29 mm on the flaming side and on a width of max. 22 mm on the lower edge. No burning material fell or dripped. Smoke generation (visual):            <u>low</u>            moderate            strong            very strong</p>							

./. Event did not occur

## 6 Assessment

### 6.1 Testing in burning case according to DIN 4102 Part 1, Section 6.2.5.2

The construction product acoustical plaster SONASPRAY K-13, special, FC, applied with a thickness of approx. 26 mm to gypsum board, met the requirements for construction material of the construction material class "Baustoffklasse B2" (normally flammable) in accordance with DIN 4102 Part 1, Section 6.2

The material is to be considered as not falling (dripping) in a burning state during the test in accordance with DIN 4102 Part 1 Section 6.2.6.

### 6.2 Testing in fire shaft according to DIN 4102 Part 1, Section 6.1.2.2

The construction product acoustical plaster SONASPRAY K-13, special, FC, applied with a thickness of approx. 22 mm on gypsum boards, passed the fire shaft test in accordance with DIN 4102 Part 1, Section 6.1.2.2.

The material is to be considered as not falling (dripping) in a burning state during the test in accordance with DIN 4102 Part 16 Section 9.3.

The tested construction product can therefore be included in the construction material class Baustoffklasse B1 ("schwerentflammbar") according to DIN 4102 under the following conditions:

- the construction product acoustical plaster SONASPRAY K-13, special, FC, may be applied to a massive mineral support or to gypsum board up to a thickness of approx 22 mm.
- the construction product may not be exposed to weather influence outside if used as an "schwerentflammbar " construction material

## 7 Special notes

In the construction supervision process, this test reports serves as a basis for the prescribed usability proof.

This test report does not replace the general construction supervision test report that may be required in the construction supervision process. It merely serves as a basis for the creation of a general construction supervision test report.

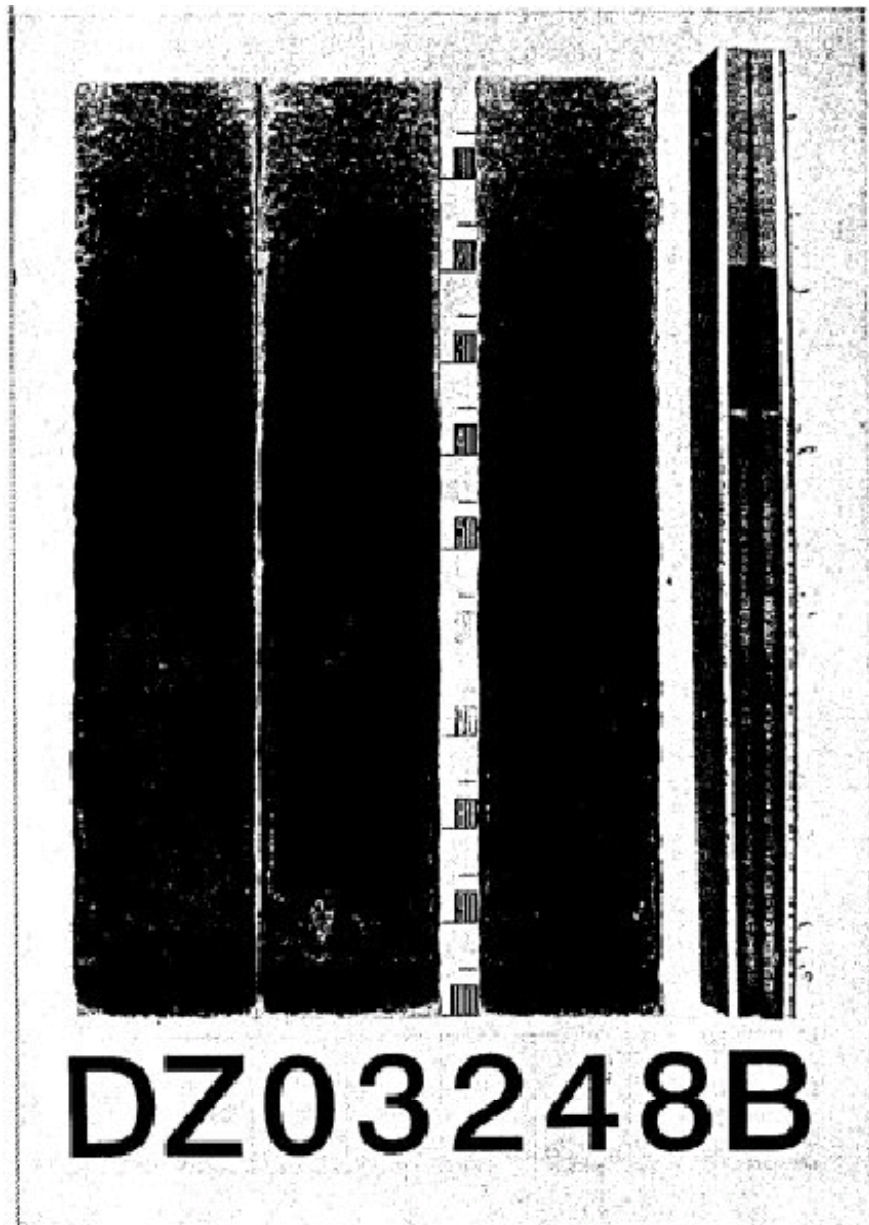
This test report is not a legal usability proof.

The validity of this test report ends on October 22, 2008.

Leipzig, November 4th, 2003

Dipl.-Phys. Kotthoff  
Head of the testing authority

Dipl.-Phys. Brinkmann  
Test engineer



Damage to the fire shaft samples  
Test body B:

Acoustical plaster SONASPRAY K-13, special, FC  
on gypsum boards,

Colour grey,  
thickness of approx. 22 mm applied to gypsum boards of a thickness of approx. 10 mm

Freely suspended sample arrangement

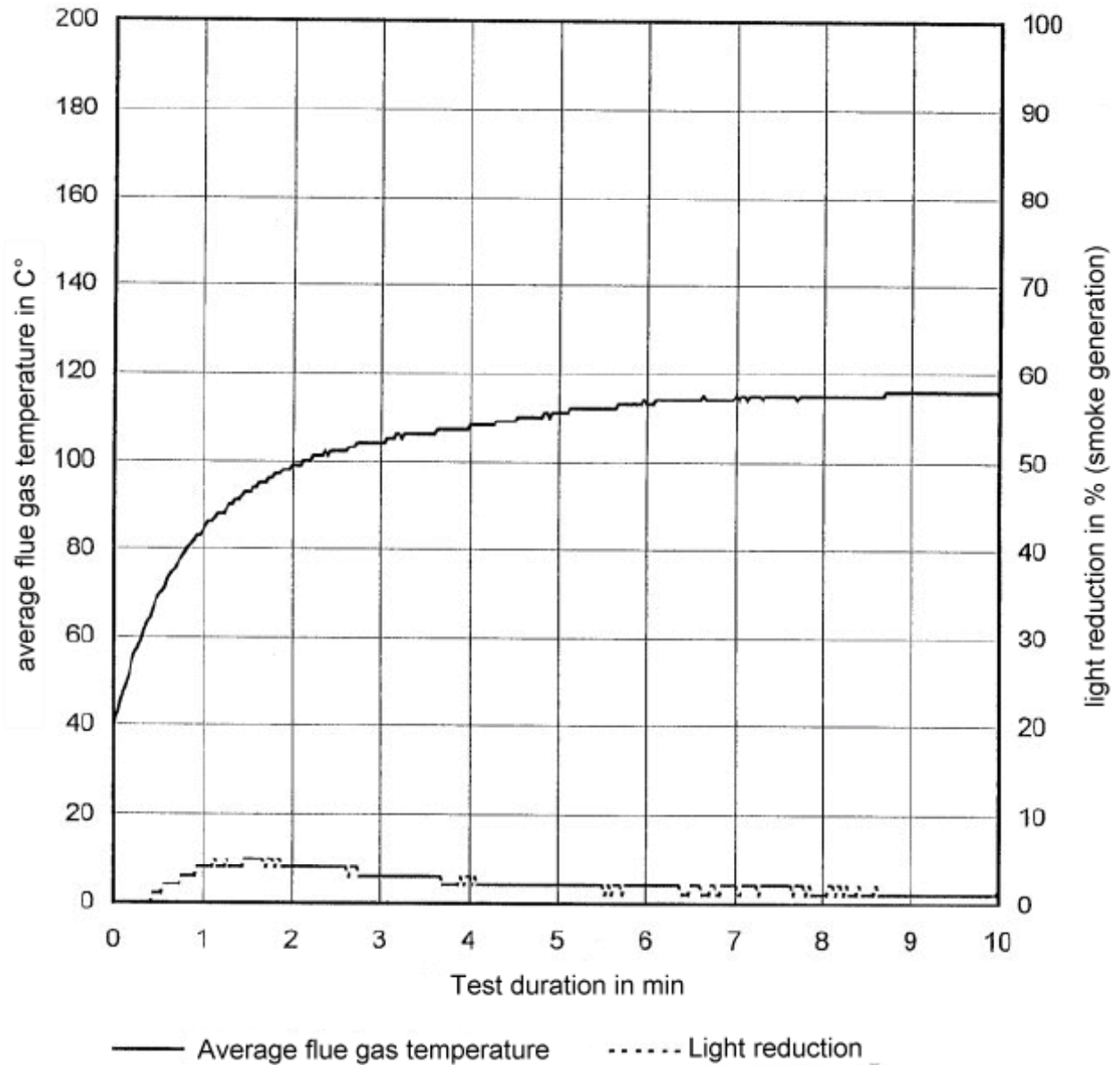
**Flue gas temperature and smoke generation**

Brand shaft test on October 23rd, 2003

Test body A: Acoustical plaster SONASPRAY K-13, special, FC on gypsum boards, total sample thickness approx. 32 mm, surface mass approx 12.8 kg/m<sup>2</sup> freely suspended sample arrangement

Maximum average flue gas temperature: 116°C after 8:42 min:s

Surface integral of smoke density: 22% min



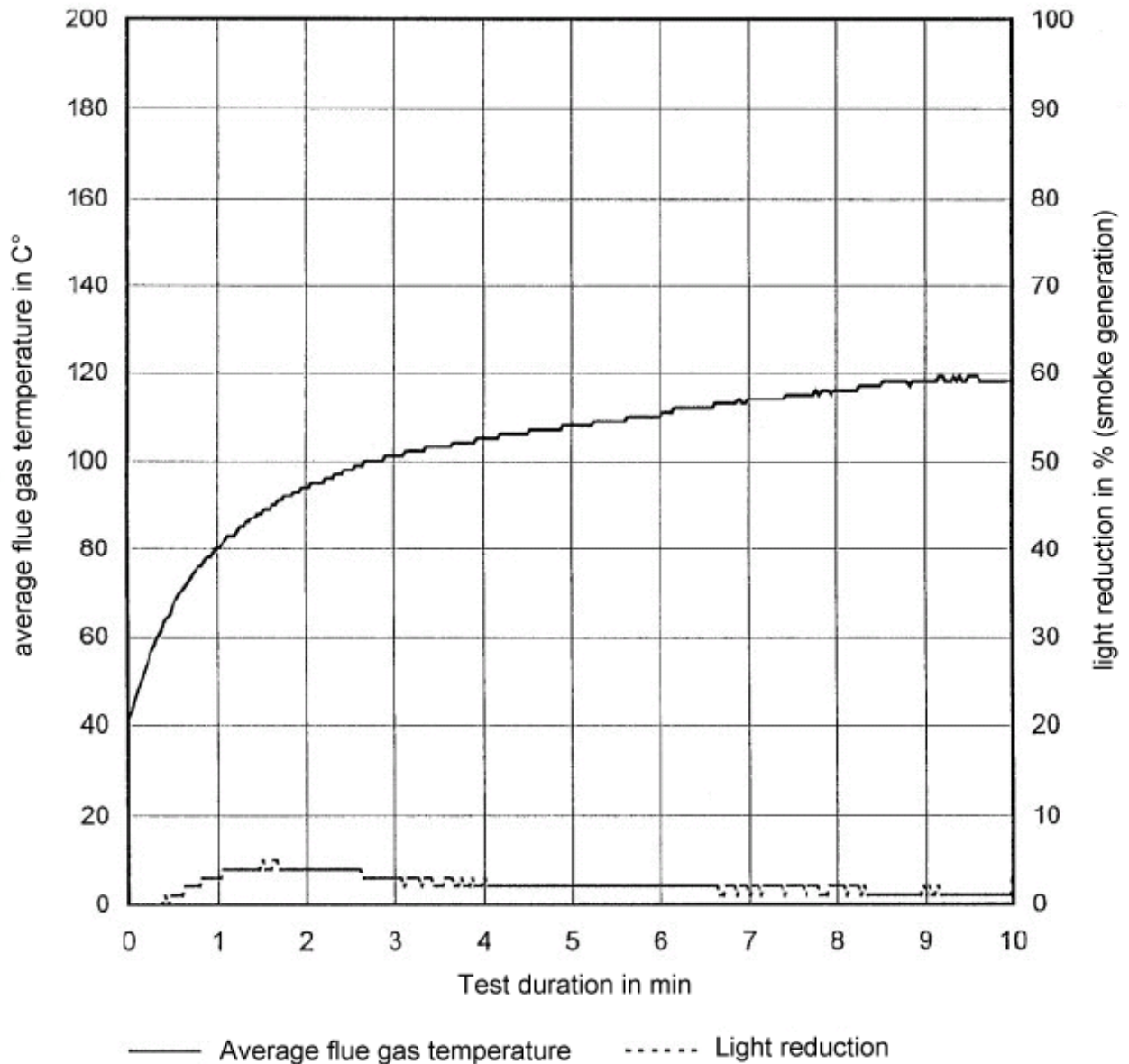
**Flue gas temperature and smoke generation**

Brand shaft test on October 23rd, 2003

Test body B: Acoustical plaster SONASPRAY K-13, special, FC on gypsum boards, total sample thickness approx. 32 mm, surface mass approx 12.8 kg/m<sup>2</sup> freely suspended sample arrangement

Maximum average flue gas temperature: 119°C after 9:10 min:s

Surface integral of smoke density: 22% min



**Flue gas temperature and smoke generation**

Brand shaft test on October 23rd, 2003

Test body C: Acoustical plaster SONASPRAY K-13, special, FC on gypsum boards, total sample thickness approx. 32 mm, surface mass approx 12.8 kg/m<sup>2</sup> freely suspended sample arrangement

Maximum average flue gas temperature: 114°C after 8:58 min:s

Surface integral of smoke density: 29% min

