

TEST REPORT NR. 15107

As a basis for a general report for the building and housing inspection

Valid until 24/10/2016

Sponsor

Alkor Draka
75, rue Pasteur
60140 Liancourt
France

Date of order: 24/06/2011
Date of sampling: 04/07/2011
Arrival of the samples: 06/07/2011
Date of test : 09/2011

Order

"Brandschacht"-test (Building material class B1) according to DIN 4102 - Part 1 (May 1998)

Material and Commercial name

PVC Vulcan® SCENIC 1108

Regulations concerning the test report

DIN 4102 - Part 1 (May 1998)

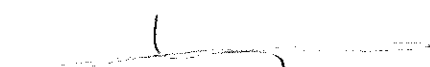
Result of the tests

The material has met the demands for non-readily ignitable building materials.

Ghent, 24 OKT. 2011



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Project Assistant



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The results of the tests apply only on the materials mentioned in this report

This report contains 14 pages including 5 annexes.

DIN 4102 teil 16 WG 1E*

This document is the original version of this test report and is written in English.

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1. IDENTIFICATION OF THE PRODUCT

Commercial name: "Vulcan® SCENIC 1108"

Description of the material: The product is a supple PVC (Polyvinylchloride) made fire-resistant in the mass

Description of the material		
Sample A : White	Nominal values (*)	Measured values (**)
Thickness (mm)	29-32/100	0,32
Surface mass (g/m ²)	415	425
Volumic mass (kg/m ³)	1430	1328
Sample B : White	Nominal values (*)	Measured values (**)
Thickness (mm)	0,41	0,41
Surface mass (g/m ²)	555	550
Volumic mass (kg/m ³)	1430	1341
Sample C : black	Nominal values (*)	Measured values (**)
Thickness (mm)	0,32	0,32
Surface mass (g/m ²)	415	420
Volumic mass (kg/m ³)	1430	1312
Sample D : black	Nominal values (*)	Measured values (**)
Thickness (mm)	0,41	0,41
Surface mass (g/m ²)	555	558
Volumic mass (kg/m ³)	1430	1362

(*) based on the information of the sponsor.

(**) values verified by the laboratory.

2. TEST RESULTS

2.1. "Brandschacht"-Test according to DIN 4102 Part 16

Result of the „Brandschacht“-test (part 1)			
Sample:	Measured values for the 3 samples		
	B	C	D1
1 <u>Number of sample-classification</u> according to DIN 4102 Teil 15 Table 1	1	1	1
2 <u>Maximum height of flame</u> from the bottom of the sample cm	80	100	100
3 at time (1) min : s	00:30	00:30	1:00
4 <u>Melting through/ Burning through</u> at time (1) min : s	00:03	00:03	00:01
5 <u>Observations on the backside of the sample</u> Flames/glowing at time (1) min : s	-	-	-
6 Colouring at time (1) min : s	-	-	-
7 <u>Flaming droplets</u> Start at (1) min : s	00:05	00:05	00:05
8 Dimension : Single falling droplets	-	-	-
9 Continuous falling droplets	yes	yes	yes
10 <u>Falling of burning particles</u> Start at (1) min : s	00:05	00:05	00:05
11 Dimension : Single falling of burning particles	-	-	-
12 Continuous falling of burning particles	yes	yes	yes
13 Afterburning on the floor (Max) min : s	-	-	-
14 <u>Diminishing of the burner flame due to falling material</u> at time (1) min : s	00:15 (*)	00:15 (*)	00:15 (*)
15 <u>Early termination of test</u> Stop of flaming of the sample (1) min	10:00	10:00	10:00
16 Time of termination (1) min : s	10:00	10:00	10:00

- (1) Time- indication from the start of the test
(*) about 10 % of the area of the burner

Result of the „Brandschacht“-test (part 2)						
Sample:	Measured values for the 3 samples					
	B		C		D1	
<u>Afterburning after the end of the test</u>						
17 Duration min : s	-	-	-	-	-	-
18 Number of samples	-	-	-	-	-	-
19 Front side of the sample	-	-	-	-	-	-
20 Back side of the sample	-	-	-	-	-	-
21 Length of the flames cm	-	-	-	-	-	-
<u>Afterglowing after the end of the test</u>						
22 Duration min:s	-	-	-	-	-	-
23 Number of Samples Place of occurring:	-	-	-	-	-	-
24 Top half of the sample	-	-	-	-	-	-
25 Bottom half of the sample	-	-	-	-	-	-
26 Front side of the sample	-	-	-	-	-	-
27 Back side of the sample	-	-	-	-	-	-
<u>Smoke attenuation</u>						
28 < 400 % x min	135,96		90,76		142,6	
29 > 400 % x min	-		-		-	
30 Graph in Annex Nr.	1		2		3	
<u>Lengths at the end of the test</u>						
31 Separate values cm	28 47	50 53	25 25	25 28	17 15	23 15
32 Average of the separate measurements cm	44,50		25,75		17,50	
<u>Smoke gas temperature</u>						
33 Max of the average values °C	118		135		185,9	
34 at time (1) min:s	9:45		00:27		00:24	
35 Graph in Annex Nr.	1		2		3	
36 <u>Remarks</u>						

(1) Time- indication from the start of the test

Result of the „Brandschacht“-test (part 1)			
Sample:	Measured values for the 3 samples		
	D1	D2	D3
1 <u>Number of sample-classification</u> according to DIN 4102 Teil 15 Table 1	1	1	1
2 <u>Maximum height of flame</u> from the bottom of the sample cm	100	100	100
3 <u>at time (1)</u> min : s	1:00	00:30	00:30
4 <u>Melting through/ Burning through</u> <u>at time (1)</u> min : s	00:01	00:03	00:03
5 <u>Observations on the backside of the sample</u> Flames/glowing <u>at time (1)</u> min : s	-	-	-
7 <u>Colouring</u> <u>at time (1)</u> min : s	-	-	-
7 <u>Flaming droplets</u> Start at (1) min : s	00:05	00:05	00:05
8 Dimension : Single falling droplets	-	-	-
9 Continuous falling droplets	yes	yes	yes
10 <u>Falling of burning particles</u> Start at (1) min : s	00:05	00:05	00:05
11 Dimension : Single falling of burning particles	-	-	-
12 Continuous falling of burning particles	yes	yes	yes
13 <u>Afterburning on the floor (Max)</u> min : s	-	-	-
14 <u>Diminishing of the burner flame due to falling material</u> <u>at time (1)</u> min : s	00:15 (*)	00:15 (*)	00:15 (*)
15 <u>Early termination of test</u> Stop of flaming of the sample (1) min	10:00	10:00	10:00
16 <u>Time of termination (1)</u> min : s	10:00	10:00	10:00

- (1) Time- indication from the start of the test
(*) about 10 % of the area of the burner

Result of the „Brandschacht“-test (part 2)						
Sample:	Measured values for the 3 samples					
	D1		D2		D3	
<u>Afterburning after the end of the test</u>						
17 Duration min : s	-	-	-	-	-	-
18 Number of samples	-	-	-	-	-	-
19 Front side of the sample	-	-	-	-	-	-
20 Back side of the sample	-	-	-	-	-	-
21 Length of the flames cm	-	-	-	-	-	-
<u>Afterglowing after the end of the test</u>						
22 Duration min:s	-	-	-	-	-	-
23 Number of Samples Place of occurring:	-	-	-	-	-	-
24 Top half of the sample	-	-	-	-	-	-
25 Bottom half of the sample	-	-	-	-	-	-
26 Front side of the sample	-	-	-	-	-	-
27 Back side of the sample	-	-	-	-	-	-
<u>Smoke attenuation</u>						
28 < 400 % x min	142,6	229,9	162,6			
29 > 400 % x min	-	-	-			
30 Graph in Annex Nr.	3	4	5			
<u>Lengths at the end of the test</u>						
31 Separate values cm	17 15	23 15	26 28	24 27	24 28	25 28
32 Average of the separate measurements cm	17,50	26,25	26,25			
<u>Smoke gas temperature</u>						
33 Max of the average values °C	185,9	190	134,3			
34 at time (1) min:s	00:24	00:30	00:27			
35 Graph in Annex Nr.	3	4	5			
36 <u>Remarks</u>						

(1) Time- indication from the start of the test

2.2. "Kleinbrenner" – Test for B2-Classification (DIN 4102 Part 1) (Surface exposure of the test material)

Sample A :

Test Nr.	1	2	3	4	5
Ignition (s)	1	1	1	1	1
Reaching the test-mark (s)	No	No	No	No	No
Self-extinction (s)	15	15	15	15	15
Extinguished after (s)	-	-	-	-	-
Maximum Flame height within the first 20s (cm) reached after (s)	4 10	5 10	4 8	4 8	4 9
Smoke development	Moderate	Moderate	Moderate	Moderate	Moderate
Time of flaming droplets (s)	No	No	No	No	No

Sample B :

Test Nr.	1	2	3	4	5
Ignition (s)	1	1	1	1	1
Reaching the test-mark (s)	No	No	No	No	No
Self-extinction (s)	15	15	15	15	15
Extinguished after (s)	-	-	-	-	-
Maximum Flame height within the first 20s (cm) reached after (s)	4 8	4 10	4 7	4 9	5 8
Smoke development	Moderate	Moderate	Moderate	Moderate	Moderate
Time of flaming droplets (s)	No	No	No	No	No

Sample C :

Test Nr.	1	2	3	4	5
Ignition (s)	1	1	1	1	1
Reaching the test-mark (s)	No	No	No	No	No
Self-extinction (s)	15	15	15	15	15
Extinguished after (s)	-	-	-	-	-
Maximum Flame height within the first 20s (cm) reached after (s)	4 8	4 9	4 8	3 7	4 9
Smoke development	Moderate	Moderate	Moderate	Moderate	Moderate
Time of flaming droplets (s)	No	No	No	No	No

Sample D :

Test Nr.	1	2	3	4	5
Ignition (s)	1	1	1	1	1
Reaching the test-mark (s)	No	No	No	No	No
Self-extinction (s)	15	15	15	15	15
Extinguished after (s)	-	-	-	-	-
Maximum Flame height within the first 20s (cm) reached after (s)	5 6	4 7	6 10	4 10	3 10
Smoke development	Moderate	Moderate	Moderate	Moderate	Moderate
Time of flaming droplets (s)	No	No	No	No	No

3. Assessment

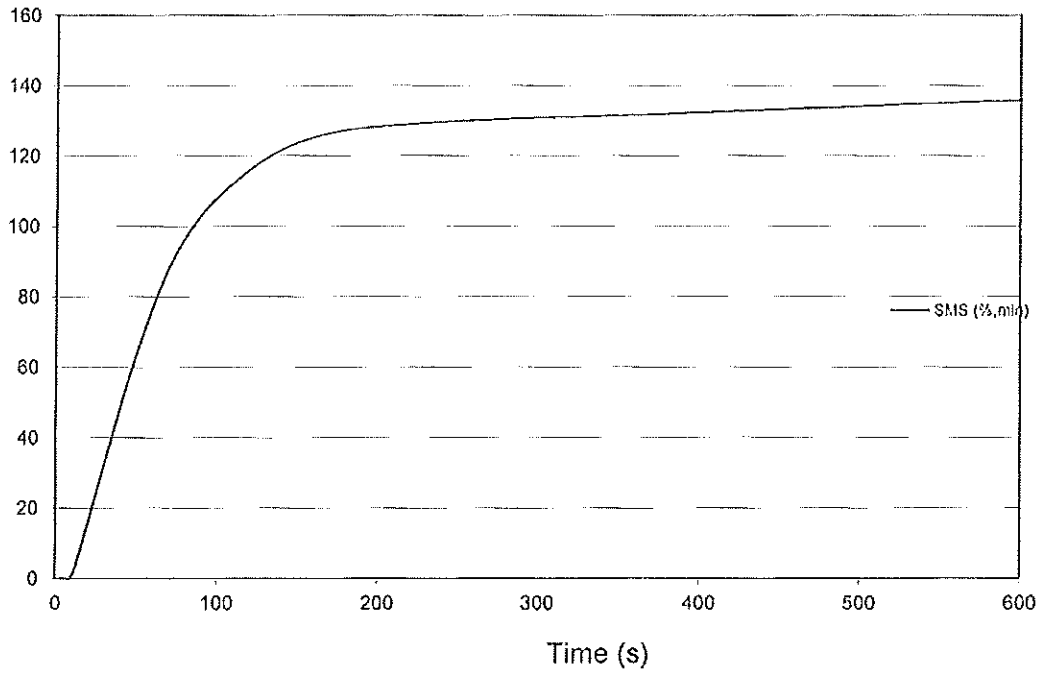
The building material, described on page 2, has complied with the requirements for non-readily ignitable building materials (schwerentflammbare Baustoffe) Class B1 according to the standard DIN 4102-1 (Edition May 1998) paragraph 6.1.2.2 and 6.2.2

4. Special remark

- 4.1 The results of this fire test are valid only for the building product as described on page 2. In connection with other building materials its fire behaviour can be influenced unfavourably. Therefore its fire behaviour in connection with other building materials should be proven separately according to the standard DIN 4102-1.
- 4.2 This test report does not replace the compulsory general approval of the building inspection. It serves as a basis for the prescribed use approval.

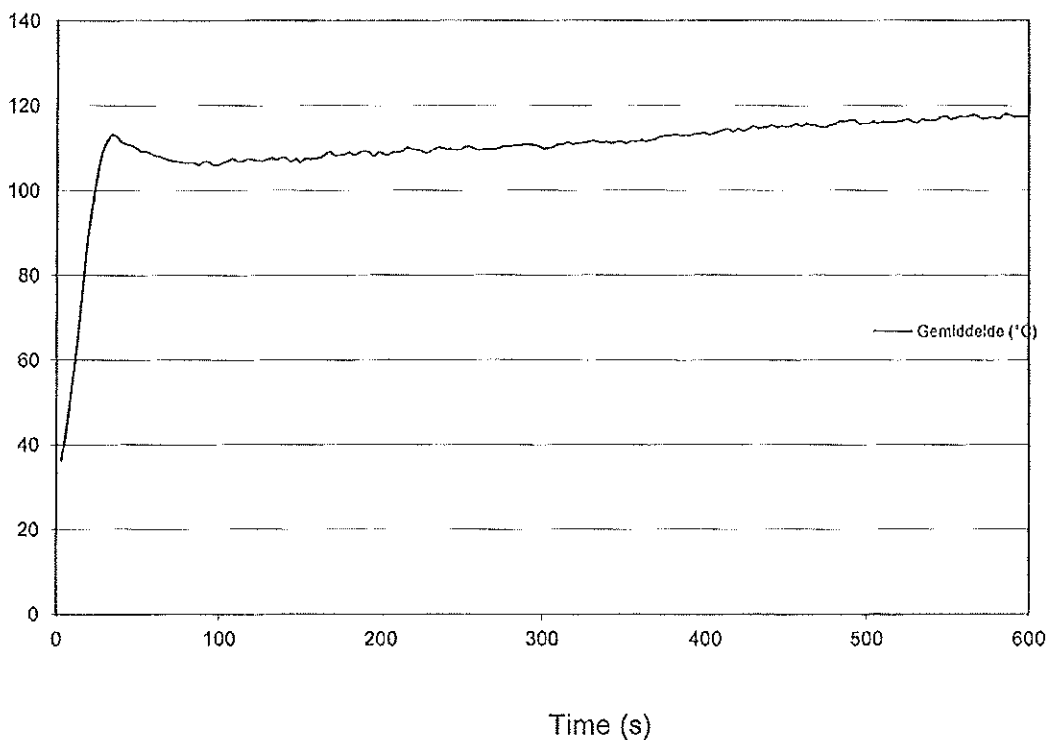
Graph of Smoke Attenuation for Sample B

Smoke (%.min)



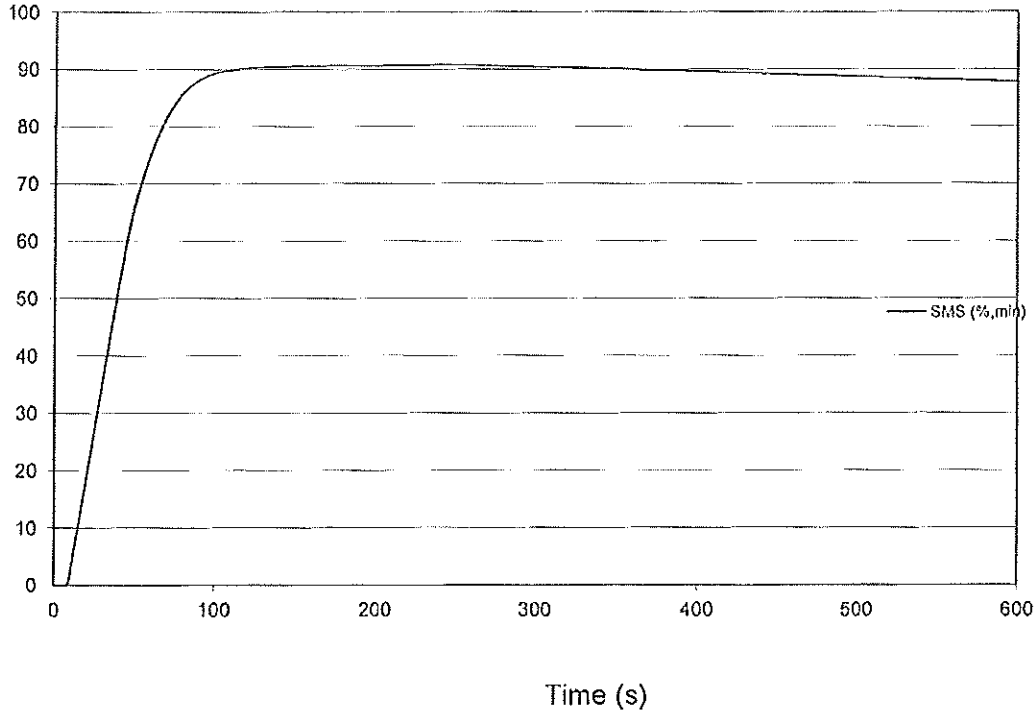
Graph of Smoke Gas Temperature for Sample B

Temperature (°C)



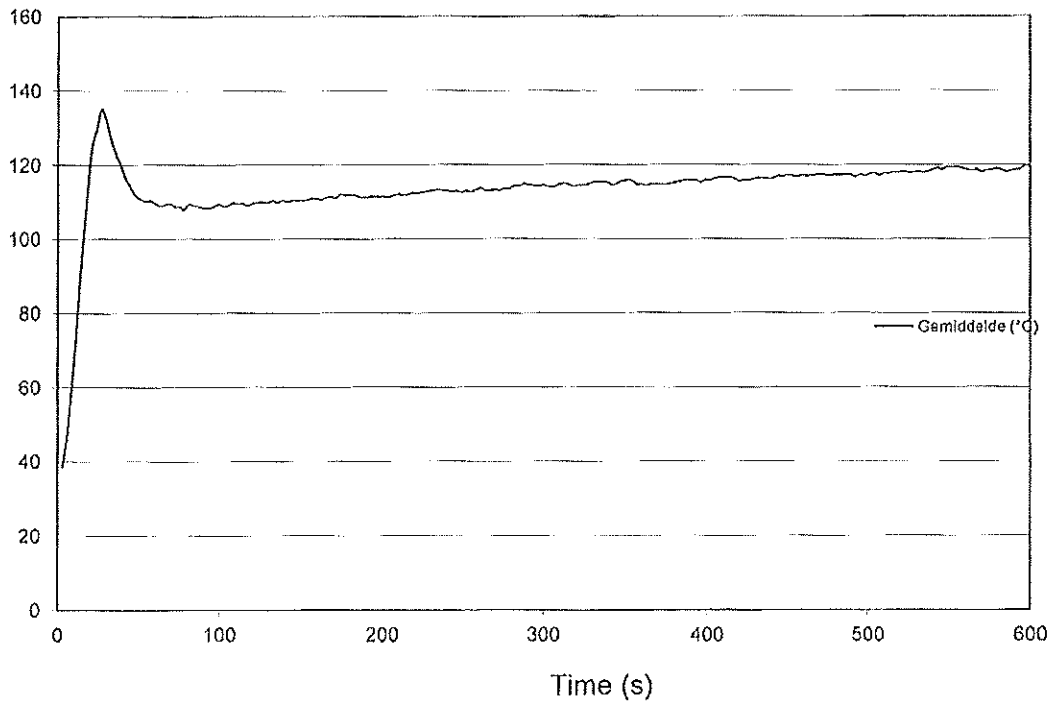
Graph of Smoke Attenuation for Sample C

Smoke (%.min)



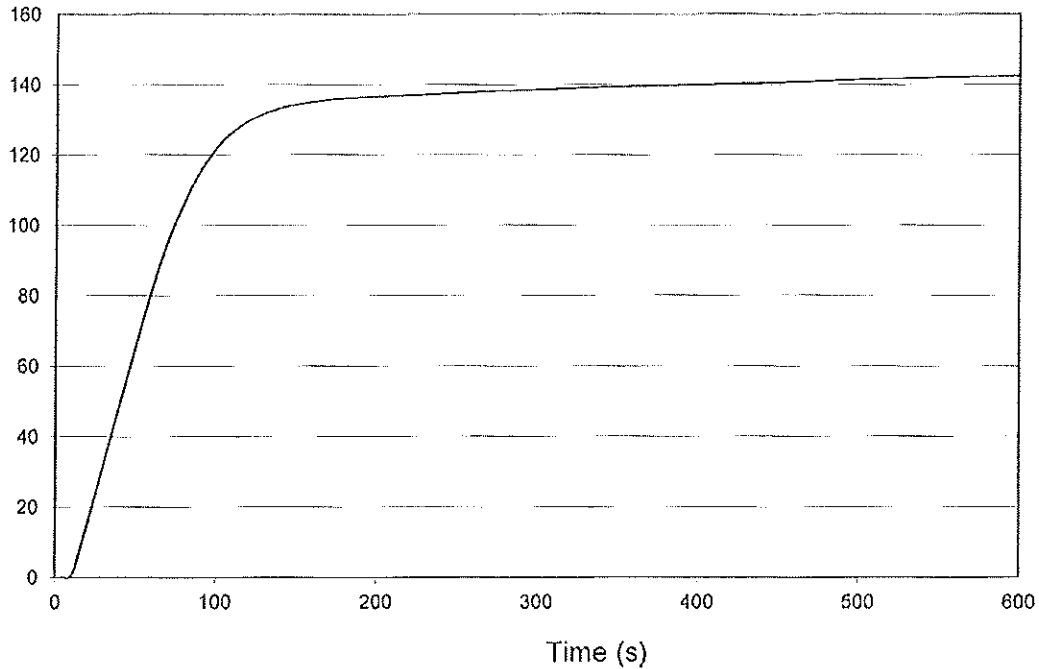
Graph of Smoke Gas Temperature for Sample C

Temperature (°C)



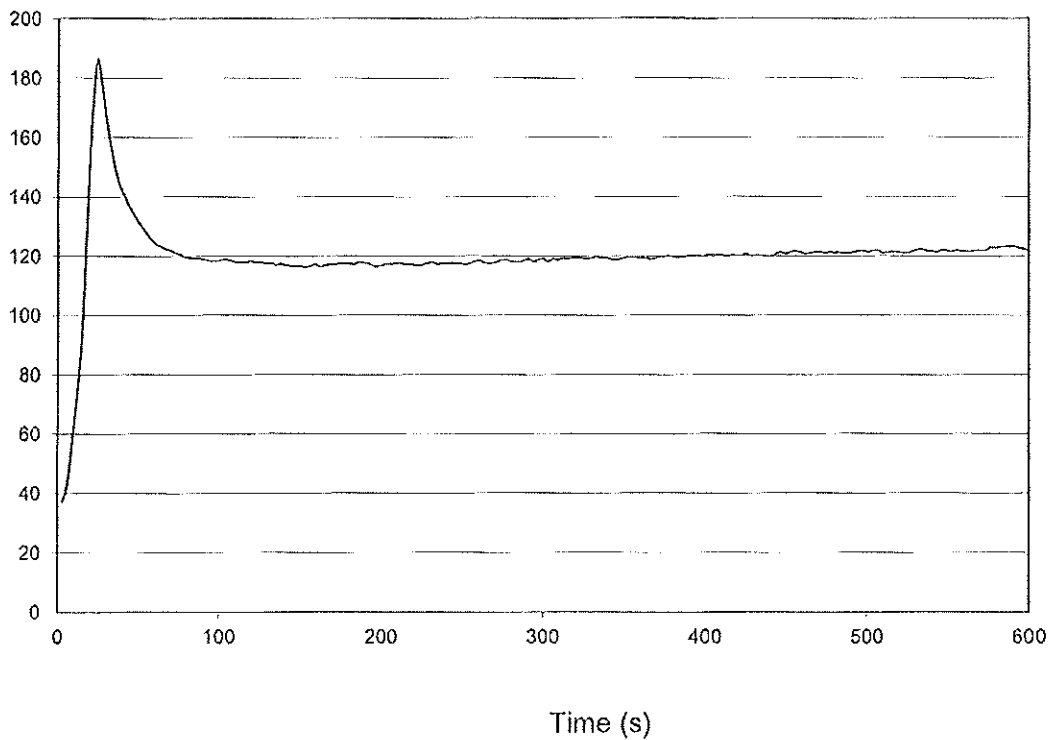
Graph of Smoke Attenuation for Sample D1

Smoke (%.min)



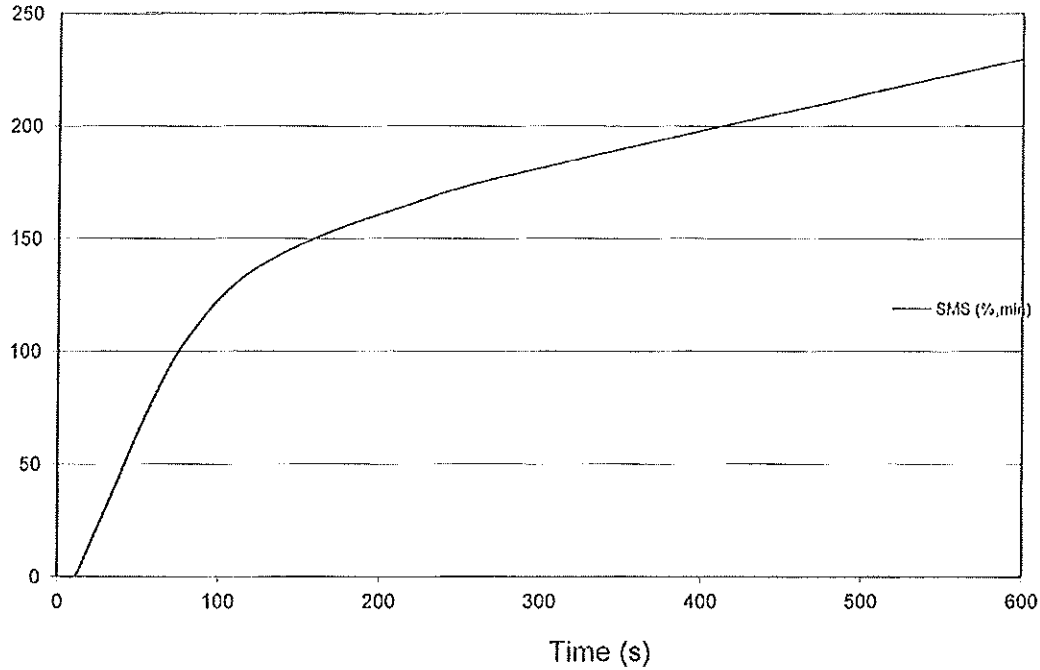
Graph of Smoke Gas Temperature for Sample D1

Temperature (°C)



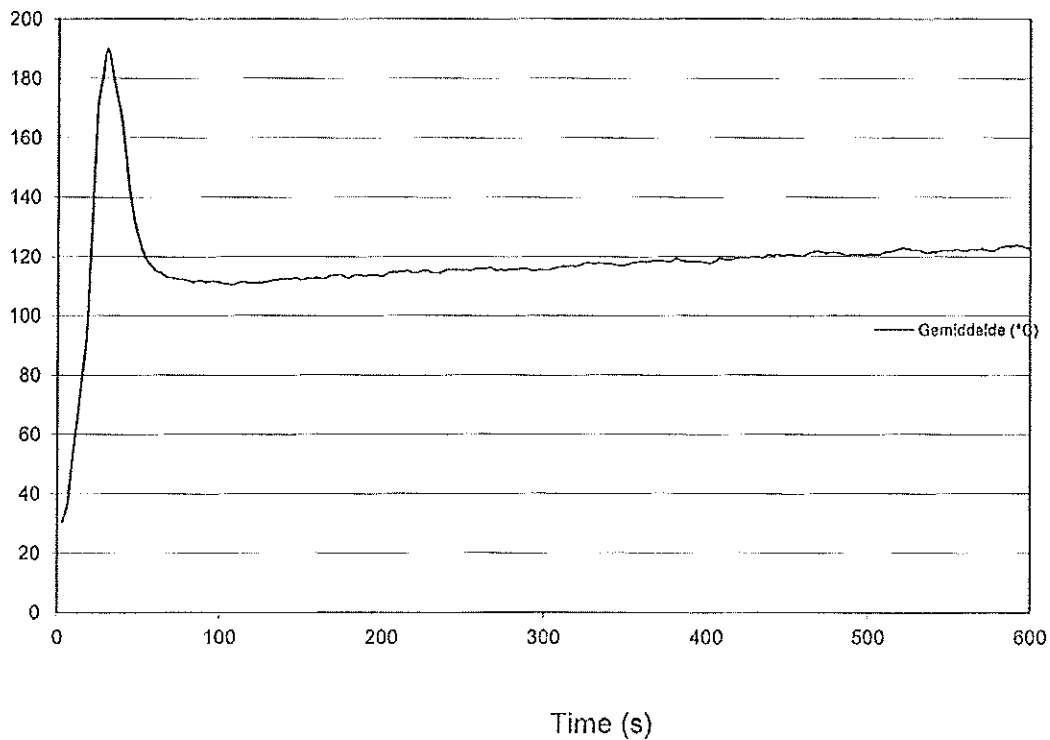
Graph of Smoke Attenuation for Sample D2

Smoke (%.min)



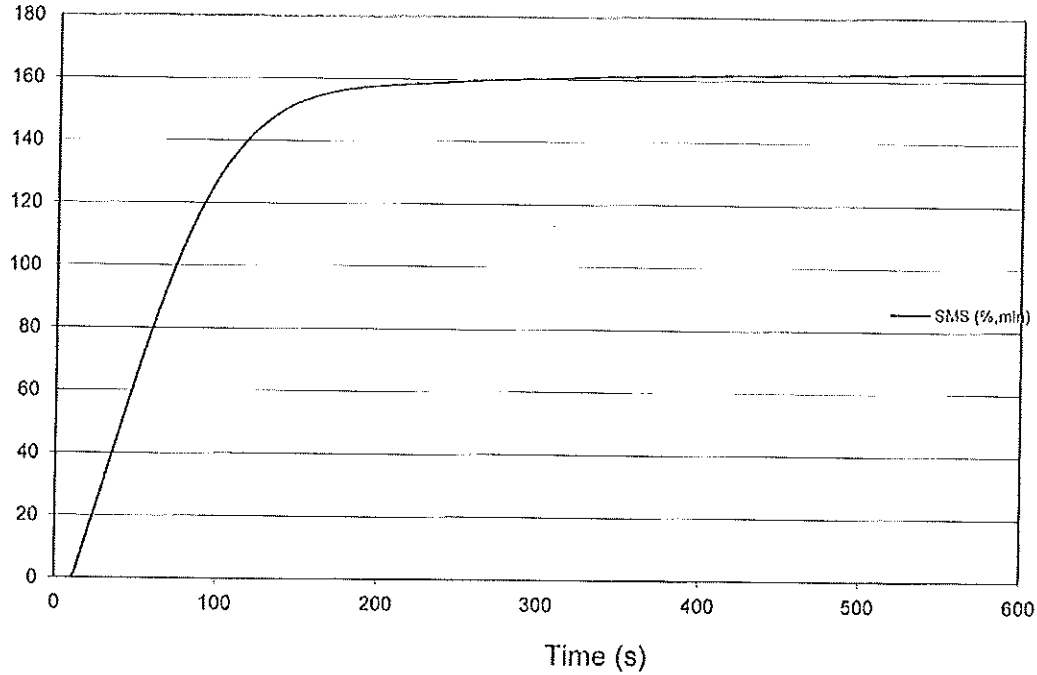
Graph of Smoke Gas Temperature for Sample D2

Temperature (°C)



Graph of Smoke Attenuation for Sample D3

Smoke (%.min)



Graph of Smoke Gas Temperature for Sample D3

Temperature (°C)

