

TEST REPORT NR. 15024

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

Valid until 31/06/2016

Sponsor

Hewlett Packard, Co
16399 W Bernardo Dr.
San Diego
CA 92127
USA

Date of order: 20/05/2011
Date of sampling: 20/05/2011
Arrival of the samples: 20/05/2011
Date of test : 31/05/2011

Order

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

Material and Commercial name

HP PVC-Free Wallpaper "Angeles" CH003B, CH098B, CH103A

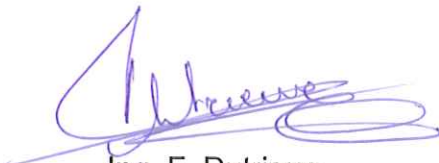
Regulations concerning the test report

DIN 4102 - Part 1 (May 1998)

Result of the tests

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

Gent, 10 AUG, 2011



Ing. F. Dutrieue
Project Manager



dr.ir. B. SETTE
General Manager

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

This report contains 9 pages including 3 annexes.

DIN 4102 teil 16 WG 1E*

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

This report may be used only literally and completely for publications. - For publications of certain texts, in which this report is mentioned, our permission must be obtained in advance.

1. IDENTIFICATION OF THE PRODUCT

Sample A : white
Sample B : red
Sample C : black

General description		HP PVC-free self-adhesive wallpaper applied to a paper faced plasterboard substrate	
Product reference of wallcovering		"C2897-110 (supplier product code) / CH003B / CH098B / CH103A (HP product codes)"	
Colour reference		"Multi-color" (stated by sponsor)	
Self-adhesive wallcovering	Product reference	"HP PVC-Free Wallpaper"	
	Thickness	0.18 ± 0.01mm (7.2 ± 0.5 mils) (stated by sponsor) 0.19mm (determined by Exova Warringtonfire)	
	Weight per unit area	175 ± 10 g/m ² (stated by sponsor) 178g/m ² (determined by Exova Warringtonfire)	
	Base material	Product reference	"C2897-110"
		Generic type	Latex saturated paper with 10% post-consumer waste fibers
		Weight per unit area	130 ± 15g/m ²
		Thickness	0.17 ± 0.01mm (6.8 ± 0.5 mils)
		Flame retardant details	See Note 1 below
	Adhesive	Product reference	The sponsor has confirmed that the component does not have a specific product reference assigned to it.
		Generic type	Water-activated glue. The sponsor was unable to provide any further information about the generic type of the adhesive.
		Application rate	See Note 2 below
		Application method	Graviur
		Flame retardant details	See Note 2 below

For substrate used you will have your own details.

Notes:

Note 1. The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the product / component.

Note 2. The sponsor of the test was unable to provide this information.

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		
	A	B	C
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	50	50	50
3 at time (1) min : s	01:00	01:00	01:00
4 <u>Melting through/ Burning through</u> at time (1) min : s	00:28	00:30	00:40
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	-	-	-
8 Dimension : Single falling droplets	-	-	-
9 Continuous falling droplets	-	-	-
10 <u>Falling of burning particles</u> Start at (1) min : s	-	-	-
Dimension :			
11 Single falling of burning particles	-	-	-
12 Continuous falling of burning particles	-	-	-
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	-	-	-
15 <u>Early termination of test</u> Stop of flaming of the sample (1) min :	-	-	-
16 Time of termination (1) min : s	-	-	-

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

Result of the „Brandschacht“-test (part 2)						
Sample:	Measured values for the 3 samples					
	A		B		C	
<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	9,54		10,49		6,06	
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	50 48	51 54	54 50	52 52	50 50	48 51
32 Average of the measurements separate cm	50,75		52		49,75	
<u>Smoke gas temperature</u>						
33 Max of the average values °C	127,25		128		131,5	
34 at time (1) min:s	9:54		9:48		01:24	
35 Graph in Annex Nr.	1		2		3	
36 <u>Remarks</u>						

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

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

Test Nr. Sample A	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)	15	15	15	15	15
Maximum Flame height within the first 20s (cm) reached after (s)	2 8	2 9	2 7	2 8	2 8
Smoke development	Low	Low	Low	Low	Low
Time of flaming droplets (s)	No	No	No	No	No

Test Nr. Sample B	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)	15	15	15	15	15
Maximum Flame height within the first 20s (cm) reached after (s)	2 7	2 6	2 7	2 6	2 6
Smoke development	Low	Low	Low	Low	Low
Time of flaming droplets (s)	No	No	No	No	No

Test Nr. Sample C	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)	15	15	15	15	15
Maximum Flame height within the first 20s (cm) reached after (s)	2 6	2 8	2 6	2 6	2 7
Smoke development	Low	Low	Low	Low	Low
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

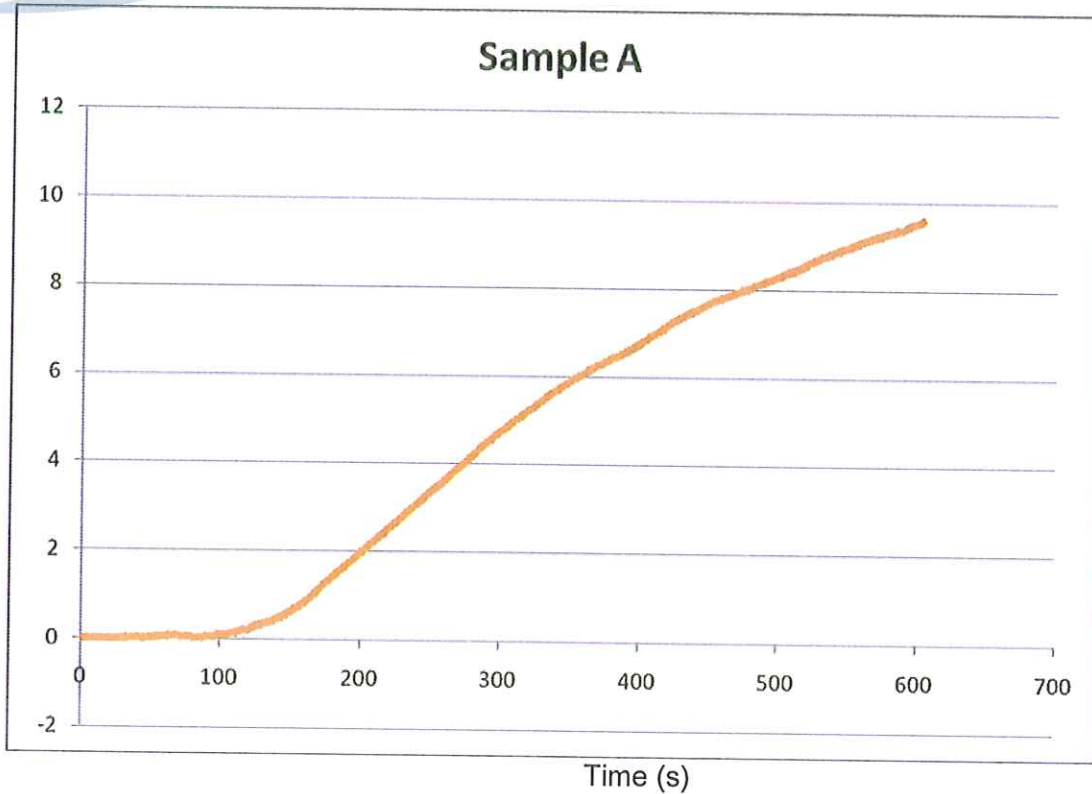
4. Special remark

4.1 The results of this fire test are valid only for the building product as described on page 2, glued on a massive mineral substrate. 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.

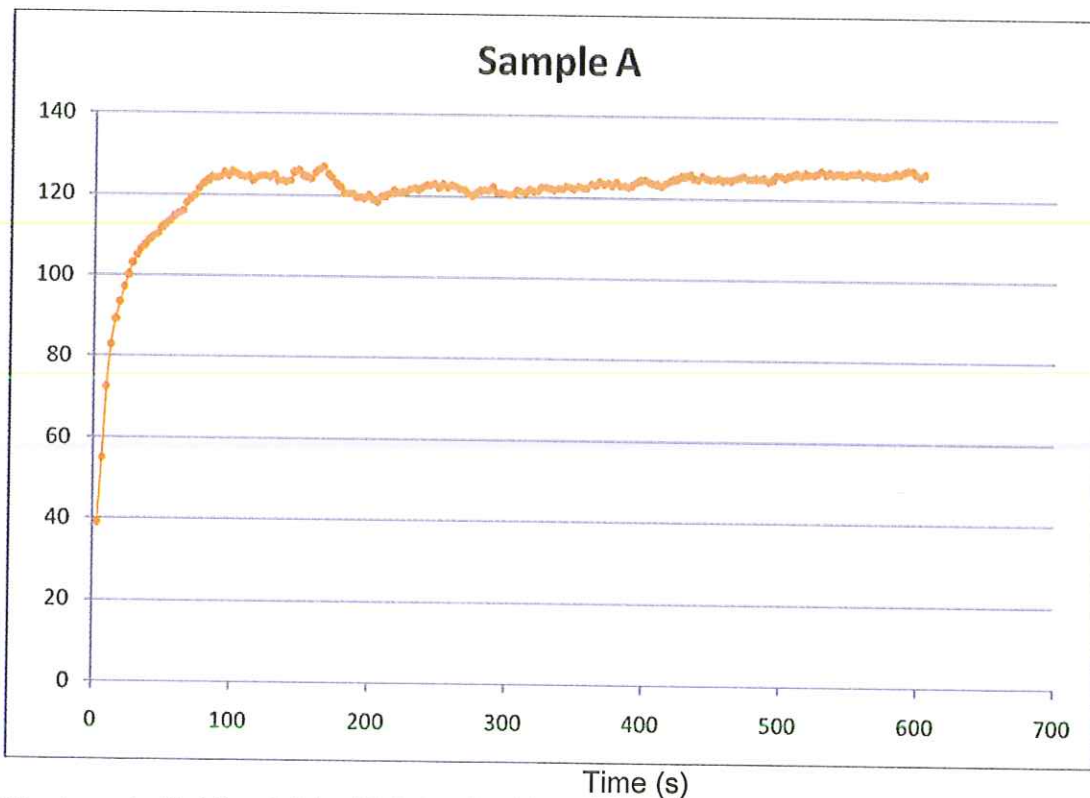
Graph of Smoke Attenuation for Sample A

Smoke (%.min)



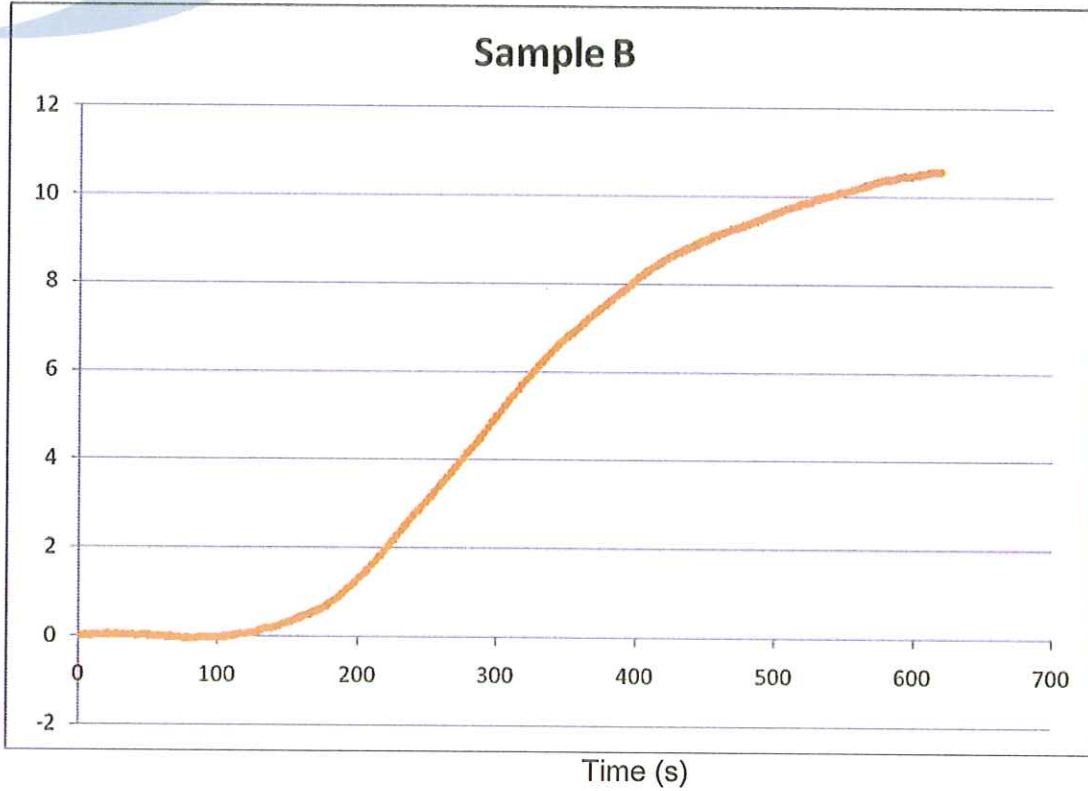
Graph of Smoke Gas Temperature for Sample A

Temperature (°C)



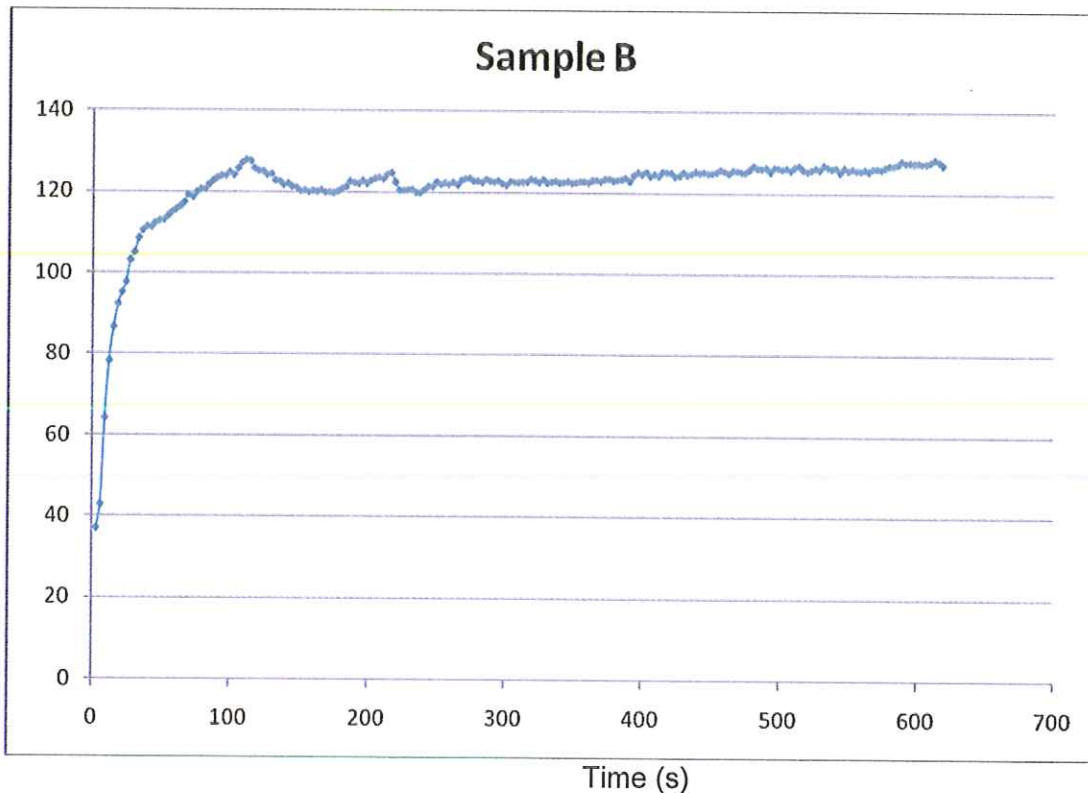
Graph of Smoke Attenuation for Sample B

Smoke (%.min)



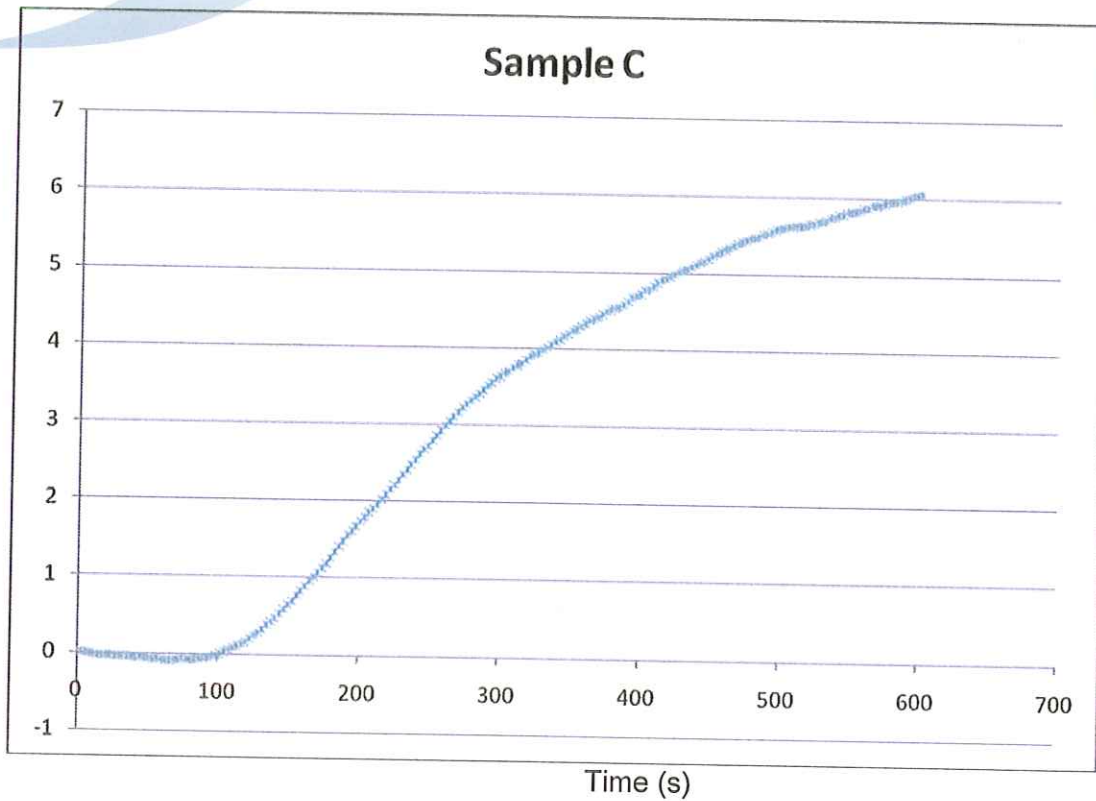
Graph of Smoke Gas Temperature for Sample B

Temperature (°C)



Graph of Smoke Attenuation for Sample C

Smoke (%.min)



Graph of Smoke Gas Temperature for Sample C

Temperature (°C)

