

GUANDONG ITALIA SRL
S.s. PAULLESE 415 KM 10 – 20090 CALEPIO DI SETTALA- ITALY
C.F. e P.IVA05512420968

The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Description: POLYFLAT DISPLAY BANNER

Color: WHITE

Composition: PVC AND POLYESTER

Addition Information: WEIGHT: 440 / 460 GSM

Test Requested:

To determine the flammability (building materials class B1) in accordance with DIN 4102-1 (May 1998) Fire behaviour of building materials and elements Part 1: Classification of building materials, Requirements and testing

Test Results: -- See attached sheet --

Classification: The tested sample **meets** class **B1** building materials requirements of DIN 4102-1 (May 1998).

Test Period:

Sample Receiving Date : FEB.15, 2018

Test Performing Date : FEB.15, 2018 TO APRIL.4, 2018

Signed for and on behalf of
SGS-CSTC Co., Ltd. Anji Branch



Civi Huang Authorized Signatory



SGS-CSTC Inspection & Testing Services
Anji Branch

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I. Test conducted

This test was conducted as per DIN 4102-15:1990 DIN 4102-16:1998 and DIN 4102-1:1998 Clause 6.2, and Classification in according to DIN 4102-1 (May 1998) Clause 6.1-Class B1 materials.

II. Sample details

General description / Color	PVC/PET/PVC MULTI-LAYER BANNER / all colour combinations
Density	1,4 (1400 g/m2/mm)
Size of sample	1000mm×190mm & 190mm×90mm

Conditioning

Prior to testing, the sample was conditioned at least 14 days to constant mass at a temperature of 23 ± 2 °C, and a relative humidity of 50 ± 6 %.

III. Test results

1) “Brandschacht” Test according to DIN 4102-15 & 16

Exposed surface: The front face

Results of “Brandschacht” Test (part 1)				
Line No.	Unit	Test assemblies No.		
		Lengthwise	Widthwise	
1	Specimen fixings according to DIN 4102 part 15, table	/	1	1
2	Max. flame height above lower sample edge;	cm	50	50
3	Time ¹⁾	min:s	0:34	0:36
4	<u>Melting/burning through</u> Time ¹⁾	min:s	0:09	0:08
5	<u>Back of specimen</u> Flaming/glowing, Time ¹⁾	min:s	0:12	0:11
6	Discolouring, Time ¹⁾	min:s	0:07	0:08
7	<u>Burning droplets</u> Begin 1)	min:s	No	No
8	<u>Amount</u> Specimen material falling off in separate droplets		/	/
9	Specimen material falling off continuously		/	/

To be continued...



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Results of "Brandschacht" Test (part 2)				
Line No.	Unit	Test assemblies No.		
		Lengthwise	Widthwise	
	<u>Burning parts</u>			
10	Begin 1)	min:s	0:12	0:13
11	Parts of sample falling off separately		√	√
12	Parts of sample falling off continuously		/	/
13	Duration of continued combustion on mesh base (max.)	min:s	No	No
	<u>Burner flame impairment by dripping/falling material</u>		No	No
14	Time ¹⁾	min:s	/	/
	<u>Premature ending of test</u>		/	/
15	End of burning at specimen ¹⁾	min:s	/	/
16	Time when test terminated (if applicable) ¹⁾	min:s	/	/
	<u>Burning after end of test</u>		No	No
17	Duration	min:s	/	/
18	Number of specimens		/	/
19	Front of specimen		/	/
20	Back of specimen		/	/
21	Height of flame	cm	/	/
	<u>Glowing after end of test</u>		No	No
22	Duration	min:s	/	/
23	Number of specimens		/	/
24	Front of specimen		/	/
25	Back of specimen		/	/
26	Top half of specimen		/	/
27	Bottom half of specimen		/	/

To be continued...



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Results of "Brandschacht" Test (part 3)						
Line No.	Unit	Test assemblies No.				
		Lengthwise		Widthwise		
	<u>Residual length</u>					
28	Single results	cm	58	52	58	59
			57	58	54	55
29	Average of the single results	cm	55.0		56.5	
	<u>Smoke temperature</u>		/		/	
30	Max. of average	°C	134.6		141.7	
31	Time ¹⁾	min:s	07:26		07:38	

Note: ¹⁾ time from start of testing

*Reduction in number of test (DIN 4102 Part 16, clause 5.2)

Class B1 materials:

If the residual length measured after the first test is 45cm or greater, further tests are not required.

2) Normal Flammability Test according to DIN 4102-1 Clause 6.2

Flame application: [] bottom edge ignition, [] surface ignition

Parameter	Lengthwise					Crosswise				
	1	2	3	4	5	6	7	8	9	10
Whether or not flaming extinguished before reach the gauge mark(Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether or not flaming reach the measuring mark within 20 seconds(Yes/No)	No	No	No	No	No	No	No	No	No	No
Time for the flame tip to reach the gauge mark(s)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Afterflame time (s)	0	0	0	0	0	0	0	0	0	0
Max. flame height (cm)	7	9	8	9	8	7	8	8	7	7
Molten dripping(Yes/No)	No	No	No	No	No	No	No	No	No	No
Smoke developments (visual impression)	Slight					Slight				

Note:

NA---Not applicable

To be continued...



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DIN 4102-1:1998 Criteria for classification

- 1) All materials, except flooring, may be classed as **B1** materials if they meet the following requirements a) and b):
 - a) The test using the 'Brandschacht' apparatus described in DIN 4102-15 (cf. subclause 6.1.3.1) shall be deemed passed if
 - The mean value for the residual length (portion of specimen that has not burned or charred; cf. subclause 9.1 of DIN 4102-16) of each specimen is at least 15 cm and no individual values are lower than 0 cm,
 - The mean effluent temperature does not exceed 200 °C in any test,
 - The requirement for the residual length of each specimen is met even where there is afterflame, afterglow, or smouldering.
 - b) Pass DIN 4102-1: 1998 sub-clause 6.2.3 Ignitability Test if

For each specimen, flaming doesn't reach the gage mark within 20s after flame application.
- 2) Materials may be classed as **B2** materials if they pass the ignitability test specified in DIN 4102-1: 1998 subclause 6.2.5.

For each specimen, flaming doesn't reach the gage mark (150mm marks) within 20s after flame application.
- 3) Combustible materials which cannot be classed as B1 or B2 materials shall be classed as **B3** materials.

STATEMENTS:

This test report does not replace any mandatory certification of the product that may be required.

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 and smoke hazard of the product in use.

To be continued...



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Photo Appendix:



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End of Report



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