

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

Sample Description: XTRA PVC PER DISPLAY 420GSM

Color: WHITE/GREY

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 : OCT.23, 2017

Test Performing Date : OCT.23, 2017 TO NOV.09, 2017

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



Allen Zou
Technical Manager

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	Xtra PVC Per Display 420gsm / White/Grey
Density	About 420 g/m ²
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.				
		A	B	C	D	
1	Specimen fixings according to DIN 4102 part 15, table	-	1			
2	Max. flame height above lower sample edge;	cm	40			
3	Time ¹⁾	min:s	00:38			
4	<u>Melting/burning through</u> Time ¹⁾	min:s	/ 00:05			
5	<u>Back of specimen</u> Flaming/glowing, Time ¹⁾	min:s	/ 00:06			
6	Discolouring, Time ¹⁾	min:s	00:03			
7	<u>Burning droplets</u> Begin ¹⁾	min:s	00:10			
8	<u>Amount</u> Specimen material falling off in separate droplets					
9	Specimen material falling off continuously					

To be continued...

Results of "Brandschacht" Test (part 2)					
Line No.	Unit	Test assemblies No.			
		A	B	C	D
	<u>Burning parts</u>	/			
10	Begin ¹⁾	min:s	00:10		
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		
	<u>Burner flame impairment by dripping/falling material</u>		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		
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		
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...

Results of "Brandschacht" Test (part 3)						
Line No.	Unit	Test assemblies No.				
		A	B	C	D	
	<u>Residual length</u>	/				
28	Single results	58	62			
29	Average of the single results	65	62			
		61.8				
	<u>Smoke temperature</u>	/				
30	Max. of average	146.5				
31	Time ¹⁾	07:32				

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

Bottom edge ignition

Flame application time: 15s

Parameter	1	2	3	4	5
Whether or not flaming extinguished before reach the gauge mark(Yes/No)	Yes	Yes	Yes	Yes	Yes
Whether or not flaming reach the measuring mark within 20 seconds(Yes/No)	No	No	No	No	No
Time for the flame tip to reach the gauge mark(s)	NA	NA	NA	NA	NA
Time of flaming extinguished from fire application (s)	2	3	2	2	3
Max. flame height (cm)	9	12	6	7	9
Molten dripping(Yes/No)	No	No	No	No	No
Smoke developments (visual impression)	Slight				

Note:

NA---Not applicable

To be continued...

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.

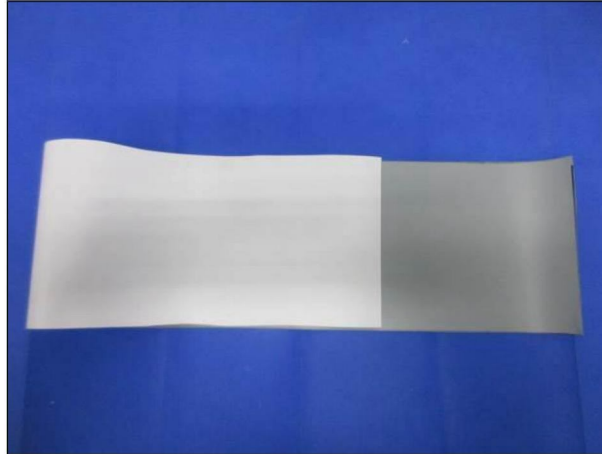
STATEMENTS:

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...

Photo Appendix:



SGS authenticate the photo on original report only

End of Report