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The following merchandise was (were) submitted and identified by the client as:

Name of Product: TARPAULIN/PLASTIC BANNER

Test Model: B01-440

Model May Cover: /

**PVC** Main Material:

Sample Received: Oct. 09, 2012

Test Period: Oct. 09, 2012 - Oct. 19, 2012

Test Request: According to customer requirements, to do DIN 4102-1 B1 level test of the

submitted sample.

Test Method: DIN 4102-1 B1-1998

Conclusion: Pass.

Issued by:

TÜV NORD (Hang Zhou)

**Green Product Service Centre Manager** 



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### 1. Description of test material in condition as delivered

According to the manufacturer polyester fabric with a permanent flame retardant treatment with a printable surface to use in door as advertising space or decoration.

### 2. Preparation of samples

The following samples were tailored and kept in a climate chamber acc. DIN 50014-23/50-2 until they reached constant weight:

- 4 samples 1000mm weft×190mm warp,(test specimen A)
- 4 samples 190mm weft×1000mm warp,(test specimen B)
- 5 samples 190mm weft×90mm warp, 5 samples 90mm weft×190mm warp
- 1 sample 230mm weft×90mm warp, 1 sample 90mm weft×230mm warp

### 3. Arrangement of samples

The tests have been performed acc .DIN 4102-1, chapter 6.2.4.2(building materials class B2) and DIN 4102-1 and -16(building materials class B1)

Arrangement of all samples: freely suspended

#### 4. Test Result:

#### **Test Result Class B1**

Line no.	Measurement		Requirements			
Line no.	Measurement	Α	В	С	D	
1	Maximal flame height above	30	30	-	-	
	bottom edgecm	1	1			
2	Time 1)min					
3	Burning/melting through	1	1	-	-	
3	Time1)min					
	Back side of the specimens:	/	/	-	-	
4	Flames/glowing					
	Time1)min:s					
	Discolouring	/	/			
5	Time1)min:s					
	Failing of burning droplets	Yes	Yes	-	-	
6	Begin	0:10	0:10			
	1)min:s					
	Extend:					
7	Sporadic falling of	Yes	Yes			
	Burning droplets					
8	Continuous falling of	No	No			
	Burning droplets					

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	1	T	1	1	1	T
9	Falling of burning parts	No	No	-	-	
	Begin 1)min:s					
	Extend:					
10	Sporadic falling of					
	Burning parts					
11	Continuous falling of					
	Burning parts					
	After flame time at the	0.01	0.01	-	-	
12	bottom of the sieve (max)					
	min:s					
	Impairment of the burner			-	-	
	flames by dropping or falling					
13	material	0.35	0.30			
13	Time 1)min:s					
	Premature end of test	No	No	-	-	
14	Final occurrence of burning					
	at the specimen					
	1)min:s					
15	Time of wventually end of					
	Test 1)min:s					
16	After flame after end	No	No	-	-	
	of test					
	Time;min:s					
17	Number of specimen					
18	Front side of specimen					
19	Back side of specimen					
20	Flame lengthcm					
	After glow after end			-	-	
	Of test	No	No			
21	Timemin:s					
22	Number of specimen					
	Place of appearance:					
23	Lower half of specimen					
24	Upper Halt of specimen					
25	Front side of specimen					
26	Back side of specimen					
	Smoke density					
27	≤400%min	0.15	2.0			
28	≥400%min(very strong					



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	smoke density)									
	Residual length			-	-					
29	Individual valuecm	68	69			>0				
		65	70							
		65	73							
		65	69							
30	Average valuecm	66	70			≥15				
	Flue gas temperature				-					
	Maximum of average	112	111			≤200				
31	value℃	9.58	9.58							
32	Time									
	1)min:s									
00	Remarks: There were no additional tests proceeded, because of residual									
33	length of more then 45cm(line									

Test Specimen A: Warp(machine direction) Test Specimen B: Weft(cross direction machine)

\*\*\*\*\*\*\* To be continued \*\*\*\*\*\*\*



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#### Test Result Class B2 (Brennkasten)

	Warp direction						Weft direction					dim	Requirements	
Sample	1	2	3	4	5	6	1	2	3	4	5	6	-	-
Ignition of the sample	2	2	2	2	4	4	2	2	2	2	4	4	S	-
Maximum flame height	5	5	6	4	7	6	4	4	5	4	8	7	cm	-
Time of the maximum		1	1	9	1	1	8	1	1	9	1	1		
	0	1	1		1	0		0	0		4	2		
Flame tip reached the	/	/	/	/	/	/	/	/	/	/	/	/	s	≥20
150mm test mark														
Flame has extinguished	1	1	1	1	1	1	9	1	1	1	2	1		
before reaching the test	1	2	3	0	3	2		1	1	0	1	8		
mark														
Lgnition of filter paper	/	/	/	/	/	/	/	/	/	/	/	/		1)
Smoke density	Moderate				Moderate						-			
Afterburning time	/	/	/	/	/	/	/	/	/	/	/	/	s	-
		•	•	•		•	•	•				•	•	•

View of the samples after the (20 seconds after exposure the flame):

-warp and weft direction:burned length:app.6cm; burned width:app.2.5cm;above

App.2cm covered with soot

## Samples 1-4:surface expoure

## Samples 5+6:edge exposure

1):not ignition within 20 seconds beginning of testing procedure

/:Not occurred

Dim:dimension

Indication of time:from the beginning of testing procedure

\*\*\*\*\*\* To be continued \*\*\*\*\*\*\*





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### **SAMPLE PHOTO**



\*\*\*\*\*\* END OF REPORT \*\*\*\*\*\*\*