

GALE PACIFIC SPECIAL TEXTILE(NINGBO) LIMITED
NO.777 HENGSHAN W. ROAD, BEILUN, NINGBO, CHINA

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

Sample Description : COMMERCIAL HEAVY 430-FR:HDPE IN IVORY
Test Performed : Selected test(s) as requested by applicant
Sample Receiving Date : Mar 09, 2018
Testing Period : Mar 09, 2018 - Mar 20, 2018
Test Result(s) : Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. For further details, please refer to the following page(s).

Conclusion
Flammability M

Remarks: M=Meet General's Requirement F=Below General's Requirement
*=No Specified Requirement

Signed for and on behalf of SGS-CSTC
Standards Technical Services Co., Ltd. Ningbo Branch



Allen He (Account Executive)



Test Result

Test Requested: ***

1. Determine the flame resistance in accordance with test method 2 (Unfolded test) of NFPA 701:2015 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
2. Determine the flame resistance in accordance with test method 1 of NFPA 701:2015 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
3. California Fire Marshal Title 19: Section 1237.1 Fire Resistance, small scale test.

1. NFPA 701:2015, method 2 (Unfolded test)

I. Test Conducted

This test was conducted in accordance with test method 2 (Unfolded test) of NFPA 701:2015 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

II. Details of tested sample

Sample description / Color	HDPE / Ivory
Area Density	445 g/m ²
Products configuration	Single layer
Size of sample *	1200mm×125mm

* With the length parallel to the lengthwise direction of the material

III. Conditioning

Prior to testing, the sample was conditioned,

For not less than 1 hour or more than 3 hours at 105°C±3°C (220°F±5°F) (Standard)

IV. Test results

Specimen No	Char length (mm)	After flame time (s)	Burning time of residues or drops (s)
1	247	0	0
2	224	0	0
3	233	0	0
4	245	0	0
5	238	0	0
6	211	0	0
7	226	0	0
8	230	0	0
9	243	0	0
10	252	0	0

To be continued...



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Criteria for test method 2 (unfolded test) (Chapter 15):

1. When any specimen continues flaming for more than 2 seconds after the test flame is removed from contact with the specimen, the material shall be recorded as having failed the test.
2. When the char length of any single flat specimen exceeds 435 mm, the material shall be recorded as having failed the test.
3. When at any time during or after the application of the test flame any portions of residues of the material being tested break or drip from the specimen and fall to the floor of the test apparatus and continue burning for more than 2 seconds after reaching the floor of the test apparatus, the material shall be recorded as having failed the test.
4. In the event that only one of the 10 flat specimens does not meet the criteria, five new specimens cut in the same direction as the one that failed shall be test.
5. If all five the new specimens meet all of the criteria, the material shall be recorded as having pass the test.

Sub-Conclusion: The tested sample “As received” **meets** the requirements of Test Method 2 (Unfolded test) of NFPA 701:2015.

To be continued....



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2. NFPA 701:2015, method 1

I. Test Conducted

This test was conducted in accordance with test method 1 of NFPA 701:2015 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

II. Details of tested sample

Sample description / Color	HDPE / Ivory
Area density	445 g/m ²
Products configuration	Single Layer
Size of sample *	150mm × 400mm 10pcs

* With the length parallel to the lengthwise direction of the material

III. Conditioning

Prior to testing, the sample was conditioned at least 30 minutes at 105°C±3°C (220°F±5°F)

IV. Test results

Specimen No.	Mass before test (g)	Mass after test (g)	Mass loss (%)	After flame time (s)	Burning time on floor (s)
1	27.87	24.74	11.23	29.6	0
2	27.72	25.51	7.97	104.3	0
3	28.44	25.72	9.56	98.5	0
4	28.96	26.09	9.91	19.6	0
5	28.49	25.63	10.04	38.6	0
6	27.63	24.89	9.92	92.6	0
7	27.92	26.11	6.48	44.3	0
8	28.08	25.62	8.76	18.6	0
9	28.52	26.44	7.29	101.7	0
10	27.66	24.98	9.69	81.3	0
Mean	28.13	25.57	9.09	62.9	0

SD =1.45 3SD =4.36 Mean + 3SD =13.44

SD – Standards deviation

To be continued...



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Observations:

Vigorousness of burning	No
Material molten dripping	Yes
Odor smoke	Yes

Criteria for test method 1 (Chapter 10):

1. Fragments or residues of specimens that fall to the floor of the test chamber shall not continue to burn for more than an average of 2 seconds per specimen for the sample of 10 specimen.
2. The average weight loss of the 10 specimens in a sample shall be 40 percent or less.
3. No individual specimen's percent mass loss shall deviate more than 3 standard deviations from the mean for the 10 specimens.
4. When a retest is required, no individual specimen's percent mass loss in the second set of specimens shall deviate from the mean value by more than 3 standard deviations calculated for the second set.
5. When a sample does not demonstrate passing performance in accordance with all of the conditions indicated above, the material shall be recorded as having failed Test Method 1.

Sub-Conclusion: The tested sample "As received" **meets** the requirements of Test Method 1 of NFPA 701:2015.

To be continued....



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3. California Fire Marshal Title 19: Section 1237.1

I. Test conducted

This test is conducted accordance with California Fire Marshal Title 19: Section 1237.1 Fire Resistance; small scale test.

II. Sample details

Sample description / Color	HDPE / Ivory
Area density	445 g/m ²
Size of sample	330mm×76mm

Conditioning

Prior to testing, the sample was conditioned, for not less than 1 hour at 60°C-62.8°C(140°F-145°F).

III. Test results

Original state

Specimen No.		Char length (mm)	After flame time (Second)	After glow time (Second)
Lengthwise	1	72	0	0
	2	70	0	0
	3	74	0	0
Widthwise	1	76	0	0
	2	78	0	0
	3	79	0	0
Average		75	0	0

ACCEPTANCE CRITERIA:

Afterflame (seconds): 2.0 maximum, individual;

Char length (mm): 152 maximum, individual.

Comments of the results:

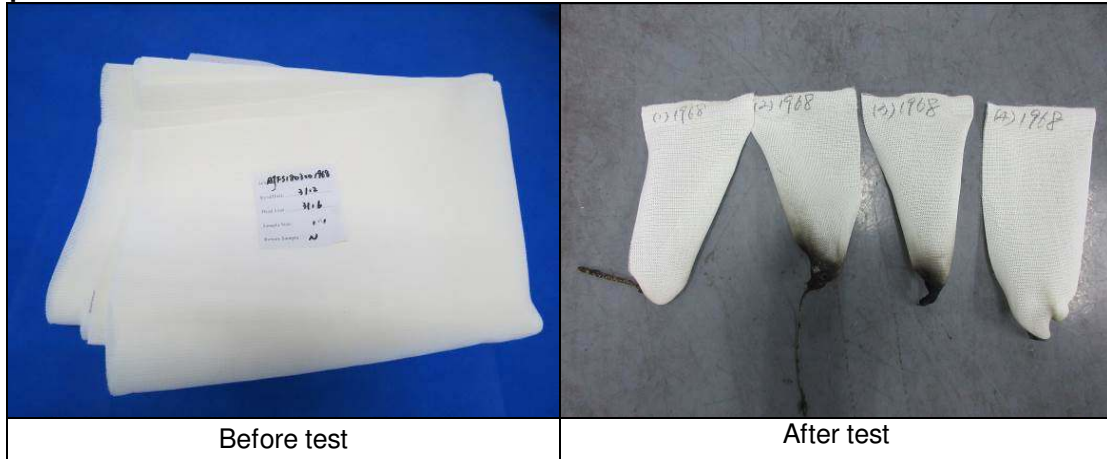
The above result of tested sample (Original state) **meets** the requirements of California Fire Marshal Title 19: Section 1237

The above result of tested sample (Original state) **does not meet** the requirements of California Fire Marshal Title 19: Section 1237

To be continued....



Photo Appendix:



SGS authenticate the photo on original report only

***** This test was carried out by SGS-CSTC ANJI – FTS Laboratory**

***** End of Report *****



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