

TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016


Page: 1 of 10

CUSTOMER NAME: HEBEI BROTHER HAO PLASTICS PRODUCTS CO., LTD
ADDRESS: DEPARTMENT STORE SECTION, JINBAO ROAD SOUTH SIDE,
DACHENG COUNTY, LANGFANG CITY, HEBEI PROVINCE, CHINA

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

Sample Name : FLEXIBLE PVC STRIP (LOW TEMPT GRADE)
SGS Ref. No. : TJHL1609004146SD; GZIN1610045448MR
Date of Receipt : Sep 30, 2016
Testing Start Date : Sep 30, 2016
Testing End Date : Oct 14, 2016
Test result(s) : For further details, please refer to the following page(s)

Signed for
SGS-CSTC Standards Technical
Services(Tianjin) Co., Ltd



Mike Wang
Authorized signatory



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 2 of 10

Summary of Results:

No.	Test Item	Test Method	Result	Conclusion	
1	Density	ASTM D792-13 Method B	1.16 g/cm ³	/	
2	Oxygen Index	ASTM D2863-13	20.9 %	/	
3	Temperature Suitability	Provided by client	No visible change	/	
4	Shore Hardness	ASTM D2240-15	A/69/1	/	
5	Tear Strength	ASTM D1938-14	33.2 N	/	
6	Tensile Test	ASTM D882-12	Tensile Strength	12.5 MPa	/
			Maximum Force	603 N	
7	Total Luminous Transmittance	ASTM D1003-13 Procedure A	90.7 %	/	
8	Water Absorption	ASTM D570-98(2010) ^{e1}	0.15 %	/	
9	Brittleness Temperature by Impact	ASTM D1790-14	Number of specimen failures: 0	/	
10	Mass Loss on Heating	With reference to ASTM D1509-95(2007) and client's requirement	0.34 %	/	

Note: Pass : Meet the requirements;
 Fail : Does not meet the requirements;
 / : Not Apply to the judgment.



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 Materials Laboratory

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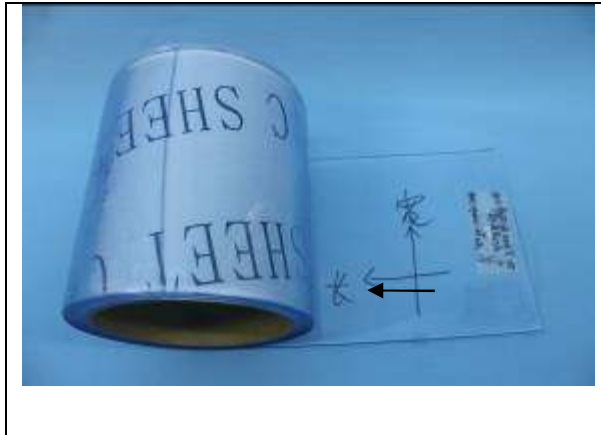
TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 3 of 10

Original Sample Photo:



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 4 of 10

1. Test Item: Density

Sample Description: See photo

Test Method: ASTM D792-13 Method B

Test Condition:

Absolute alcohol, (23±0.5) °C

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Density	1.16 g/cm ³

Note: Test specimens were cut from the sample.

2. Test Item: Oxygen Index

Sample Description: See photo

Test Method: ASTM D2863-13

Test Condition:

Specimen: Type V

Specimen thickness: 1.95 mm

Ignition procedure: Procedure B

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Oxygen Index	20.9 %

Note:

1. Burning behavior: erratic burning.
2. Test specimens were cut from the sample.



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 5 of 10

3. Test Item: Temperature Suitability

Sample Description: See photo

Test Method: Provided by client

Test Condition:

Condition: -40 °C, 48 h

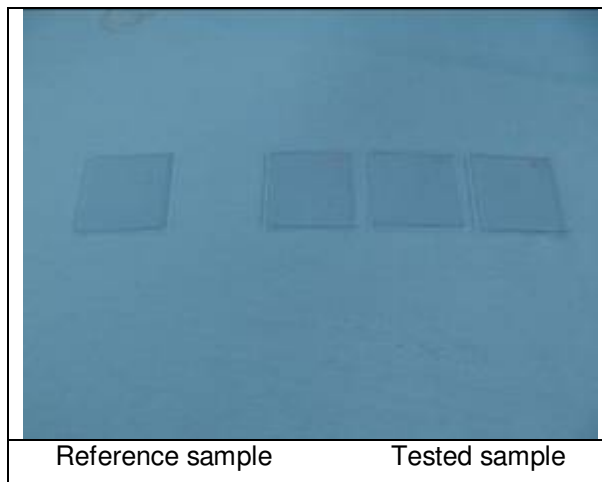
Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Appearance
Temperature Suitability	No visible change

Note: Test specimens were cut from the sample.

Test Photo:



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 6 of 10

4. Test Item: Shore Hardness

Sample Description: See photo

Test Method: ASTM D2240-15

Test Condition:

Specimen thickness: 5.74 mm (3 layers plied up)

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Shore Hardness	A/69/1

Note:

1. A/X/1 Indicated that A is the type of durometer; 1 s is the reading time; X is the hardness value.
2. Test specimens were cut from the sample.

5. Test Item: Tear Strength

Sample Description: See photo

Test Method: ASTM D1938-14

Test Condition:

Specimen thickness: 1.95 mm

Testing speed: 250 mm/min

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Tear Strength	33.2 N

Note: Test specimens were cut from the sample.



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 7 of 10

6. Test Item: Tensile Test

Sample Description: See photo

Test Method: ASTM D882-12

Test Condition:

Specimen width: 25 mm

Specimen thickness: 1.95 mm

Testing speed: 500 mm/min

Grip separation: 50 mm

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result	
Tensile Test	Tensile Strength	12.5 MPa
	Maximum Force	603 N

Note: Test specimens were cut from the sample.

7. Test Item: Total Luminous Transmittance

Sample Description: See photo

Test Method: ASTM D1003-13 Procedure A

Test Condition:

Specimen thickness: 1.95 mm

Light source: C

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Total Luminous Transmittance	90.7 %

Note: Test specimens were cut from the sample.



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 8 of 10

8. Test Item: Water Absorption

Sample Description: See photo

Test Method: ASTM D570-98(2010)^{ε1}

Test Condition:

Specimen: 76.1 mm × 24.7 mm × 1.95 mm

Drying condition: (50±3) °C, 24 h

Immersion condition: (23±1) °C, 24 h

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Water Absorption	0.15 %

Note:

1. Water Absorption, %=(Mass after immersion-Mass after drying and before immersion)/Mass after drying and before immersion×100
2. Test specimens were cut from the sample.



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 9 of 10

9. Test Item: Brittleness Temperature by Impact

Sample Description: See photo

Test Method: ASTM D1790-14

Test Condition:

Test temperature: -45 °C

Exposed time of test specimen to test temperature: 15 min

Specimen thickness: 1.95 mm

Number of specimens tested: 10

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Brittleness Temperature by Impact	Number of specimen failures: 0

Note: Test specimens were cut from the sample.



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TEST REPORT

No. : TJIN1609012363PS

Date : Oct 14, 2016

Page: 10 of 10

10. Test Item: Mass Loss on Heating

Sample Description: See photo

Test Method: With reference to ASTM D1509-95(2007) and client's requirement

Test Condition:

Condition: 125 °C, 1 h

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result
Mass Loss on Heating	0.34 %

Note:

1. Mass Loss on Heating, $\% = \frac{\text{Mass before heating} - \text{Mass after heating}}{\text{Mass before heating}} \times 100$
2. Test specimens were cut from the sample.

Appendix information: The above test was carried out by a SGS internal laboratory.

***** End of report*****



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