

No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 1 of 10



CUSTOMER NAME: QINGDAO JUMBO INTERNATIONAL TRADE CO.,LTD.

ADDRESS: NO.2 FENGXIAN RD, SHINAN DISTRICT, QINGDAO, CHINA

Sample Name : HDPE sheet
Product Specification : 300x300x25mm

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

\*\*\*\*\*

SGS Ref. No. : SHIN2112090708PS

Date of Receipt : Dec 28, 2021
Testing Start Date : Dec 28, 2021
Testing End Date : Jan 10, 2022

Test result(s) : For further details, please refer to the following page(s)

(Unless otherwise stated the results shown in this test report refer only to

the sample(s) tested)

Signed for

SGS-CSTC Standards Technical Service (Shanghai)Co., Ltd.



Authorized signatory





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 2 of 10

## Summary of Results:

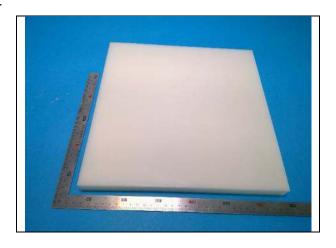
No.	Test Item	Test Method	Result	Conclusion
	Static Coefficient of Friction	ISO 8295:1995 and Client's Requirement	0.684	
1	Kinetic Coefficient of Friction		0.470	/
2	Compressive Strength	ISO 604:2002	See result	/
3	Density	ISO 1183-1:2019 Method A	0.942 g/cm <sup>3</sup>	/
4	Flexural Strength	ISO 178:2019 Method A	17.9 MPa	/
5	Resistance to Wear	ISO 9352:2012	See result	/
6	Shore Hardness	ISO 868:2003	D/15:57	/
7	Tensile Strength	ISO 527-1:2019 & ISO 527- 2:2012	18.2 MPa	/
	Elongation at Break		160 %	] '

Note: Pass: Meet the requirements;

Fail: Does not meet the requirements;

/: Not Apply to the judgment.

## Original Sample Photo:





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No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 3 of 10

1. Test Item: Coefficient of Friction

Sample Description: Sheet Test Method: ISO 8295:1995

Client's Requirement: Specimen thickness: 4.19 mm

**Test Condition:** 

Specimen thickness: 4.19 mm

Load: 200 g

Testing speed: 100 mm/min Testing displacement: 100 mm

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

### Test Result:

Test Item	Test Result
Static Coefficient of Friction	0.684
Kinetic Coefficient of Friction	0.470

### Note:

- 1. Test specimens were cut from the sample.
- 2. Cannot be stamped.

The test method ISO 8295:1995 is not in the accredited testing scope of CNAS.





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 4 of 10

2. Test Item: Compressive strength

Sample Description: Sheet Test Method: ISO 604:2002

**Test Condition:** 

Specimen: Type B

Specimen thickness: 9.68 mm Testing speed: 1 mm/min

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

### Test Result:

Test Item	Test Result
Compressive strength	See table 1 and note 2

### Note:

- 1. Test specimens were cut from the sample.
- 2. Out of the range of the equipment.

#### Table 1

Specimen No.	1	2	3	4	5
Result, MPa	>122.0	>133.5	>137.1	>133.4	>132.6





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 5 of 10

3. Test Item: Density

Sample Description: Sheet

Test Method: ISO 1183-1:2019 Method A

**Test Condition:** 

Absolute alcohol, 23 ± 0.5 °C

Lab Environmental Condition:  $23 \pm 2 \,^{\circ}\text{C}$ ,  $50 \pm 5 \,^{\circ}\text{RH}$ 

#### Test Result:

Test Item	Test Result
Density	0.942 g/cm <sup>3</sup>

### Note:

- 1. The accuracy of the results [(Measured value Mean value) / Mean value] was not between 0.2 % and 0.05 %, so according to the standard, the correction for buoyancy in air is not required.
- 2. Test specimens were cut from the sample.





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 6 of 10

4.Test Item: Flexural Strength Sample Description: Sheet

Test Method: ISO 178:2019 Method A

**Test Condition:** 

Specimen: 200 mm × 14.751 mm × 9.410 mm

Testing speed: 5 mm/min

Span: 150 mm

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

Test Result:

Test Item	Test Result
Flexural Strength	17.9 MPa

## Note:

1. Flexural strength was the maximum strength obtained over the 3.5% strain limit.

2. Test specimens were cut from the sample.





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 7 of 10

5. Test Item: Resistance to Wear

Sample Description: Sheet Test Method: ISO 9352:2012

**Test Condition:** 

Wheel: CS-10

Load: 250g/wheel (total 500g)

Speed: 60 rpm Cycles: 2000

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

Test Result:

Sample	Appearance
1	Visual wear.

Note: Test specimens were cut from the sample.



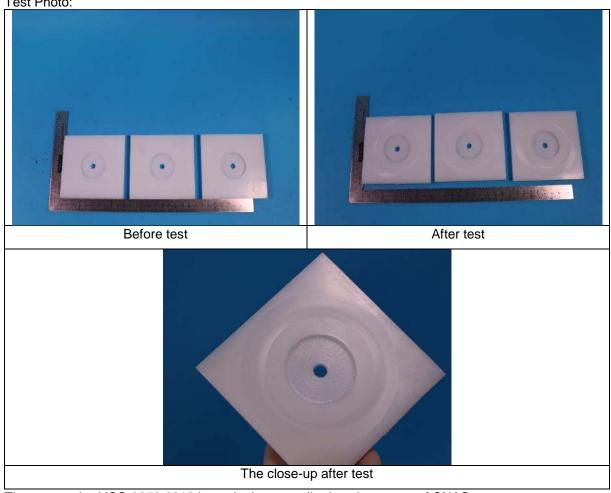


No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 8 of 10

Test Photo:



The test method ISO 9352:2012 is not in the accredited testing scope of CNAS.



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No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 9 of 10

6. Test Item: Shore Hardness Sample Description: Sheet Test Method: ISO 868:2003

**Test Condition:** 

Specimen thickness: 24.66 mm

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

Test Result:

Test Item	Test Result
Shore Hardness	D/15:57

### Note:

1. D/15:57 Indicates that D is the type of durometer; 15 s is the reading time; 57 is the hardness value.

2. Test specimens were cut from the sample.





No.: SHIN2112090776MR

Date: Jan 10, 2022

Page: 10 of 10

7. Test Item: Tensile Test Sample Description: Sheet

Test Method: ISO 527-1:2019 & ISO 527-2:2012

**Test Condition:** 

Specimen: Type 1B

Specimen width at narrow portion: 9.920 mm

Specimen thickness: 10.090 mm

Testing speed: 50 mm/min Gauge length: 50 mm

Initial distance between grips: 115 mm

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

### Test Result:

Test Item	Test Result
Tensile Strength	18.2 MPa
Elongation at Break	160 %

Note: Test specimens were cut from the sample.

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

