TEST REPORT

No. : QDIN2408001498PL01_EN
Date : 2024-08-13

Scan to see the report
QDIN2408001498PL01
Verification:
check.sgsonline.com.cn

CUSTOMER NAME: SHANDONG SHENGTEER NEW MATERIAL TECHNOLOGY CO., LTD

ADDRESS: NO. 2, DEDA YIYUAN SCIENCE AND TECHNOLOGY INNOVATION PARK, DONGYAN ROAD, MAJIAHE ROAD, LINGCHENG DISTRICT, DEZHOU CITY, SHANDONG PROVINCE

Sample Name	:	UHMW-PE PAD
Manufacturer	:	Shandong Shengteer New Material Technology Co., Ltd
Material	:	UHMW-PE

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.

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SGS Ref. No.	:	TJMR240800458901
Date of Receipt	:	2024-08-05
Testing Period	:	2024-08-05 ~ 2024-08-13
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 Services (Qingdao) Co., Ltd..

Kayla Chu

Kayla Chu
Authorized signatory

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Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Tensile Test	DIN 53455:1981	See result	N/A
2	Coefficient of Friction	ISO 8295:1995	See result	N/A
3	Shore Hardness	With reference to DIN 53505:2000 and client's requirement	64 Shore D	N/A
4	Density	ISO 1183-1:2019 Method A	0.937g/cm^3	N/A
5	Flexural Strength	DIN 53452:1977	25.9MPa	N/A
6	Compressive Stress at 25% Strain	ISO 604:2002	41.3MPa	N/A
7	Mass Wear Loss	GB/T 3960-2016 and client's requirement	0.0005g	N/A
8	Charpy Double-Notched Impact Strength	ISO 21304-2:2021 Annex C	119 kJ/m^2	N/A

Note: 1. Pass : Meet the requirements;
Fail : Does not meet the requirements;
N/A : Not Apply to the judgment.

2. Test items 6-8 were carried out by SGS-CSTC Standards Technical Services （Tianjin）Co., Ltd. (CNAS L2774, CMA 220200340104).

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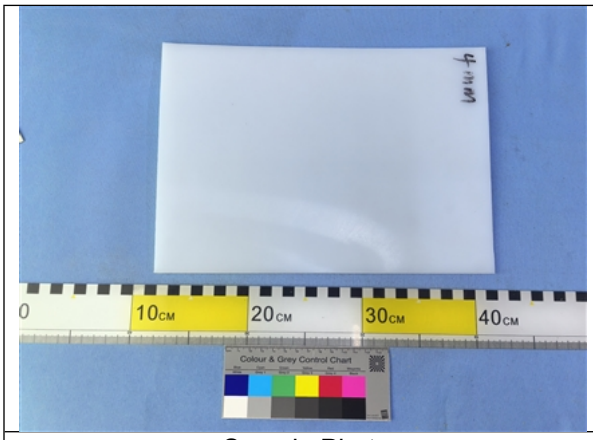
Original Sample Photo:

	
Sample Photo	Sample Photo

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1. Test Item: Tensile Test

Sample Description: Plastic part

Test Method: DIN 53455:1981

Test Condition:

Specimen thickness: 4.26mm

Testing speed: 50mm/min

Gauge length: 50mm

Grip separation: 115mm

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

Test Result:

Test Item	Test Result
Tensile Stress at Yield	25.2MPa
Tensile Strain at Yield	11%
Tensile Stress at Break	32.7MPa
Nominal Tensile Strain at Break	260%

Note: Test specimens were cut from the sample.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2024-07-22	2025-07-21

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2. Test Item: Coefficient of Friction

Sample Description: Plastic part

Test Method: ISO 8295:1995

Test Condition:

Specimen thickness: 6.08mm

Testing speed: 100mm/min

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

Test Result:

Test Item	Test Result
Static Coefficient of Friction(μ_s)	0.065
Kinetic Coefficient of Friction(μ_k)	0.054

Note:

1. Test specimens were cut from the sample.
2. The test surface was an unpolished surface

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Friction Coefficients Tester	MXD-02	POL-PL-E012	2024-06-21	2025-06-20

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No. : QDIN2408001498PL01_EN

Date : 2024-08-13

3.Test Item: Shore Hardness

Sample Description: Plastic part

Test Method: With reference to DIN 53505:2000 and client's requirement

Test Condition:

Specimen thickness: 4.25mm

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

Test Result:

Test Item	Test Result
Shore Hardness	64 Shore D

Note: Test specimens were cut from the sample.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Shore Type D Hardness Meter	Asker D	POL-PL-E007	2023-12-06	2024-12-05

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4.Test Item: Density

Sample Description: Plastic part

Test Method: ISO 1183-1:2019 Method A

Test Condition:

Absolute alcohol, (23±0.5)℃

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

Test Result:

Test Item	Test Result
Density	0.937g/cm^3

Note: Test specimens were cut from the sample.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Electron Balance	XPE204	POL-PL-E008	2023-12-26	2024-12-25

5. Test Item: Flexural Strength

Sample Description: Plastic part

Test Method: DIN 53452:1977

Test Condition:

Specimen: 85mm×10.1mm×4.12mm

Testing speed: 10mm/min

Span: 68mm

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

Test Result:

Test Item	Test Result
Flexural Strength	25.9MPa

Note: Test specimens were cut from the sample.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2024-07-22	2025-07-21

6.Test Item: Compressive Stress at 25% Strain

Sample Description: Plastic part

Test Method: ISO 604:2002

Test Condition:

Specimen: Type B

Specimen thickness: 10.2mm

Testing speed: 1mm/min

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

Test Result:

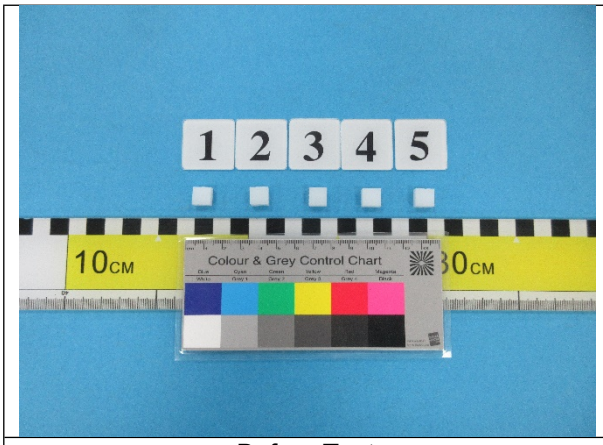
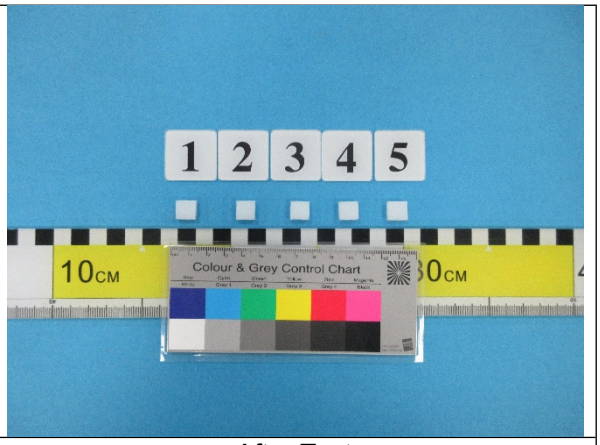
Test Item	Test Result
Compressive Stress at 25% Strain	41.3MPa

Note:

1.Test specimens were cut from the sample.

2. The testing direction is the thickness direction.

Test Photo:

	
Before Test	After Test

TEST REPORT

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Testing Machine	CMT4304	POL-116	2023-08-28	2024-08-27

7.Test Item: Mass Wear Loss

Sample Description: Plastic part

Test Method: GB/T 3960-2016 and client's requirement

Test Condition:

Specimen: 30mm×6.98mm×8.24mm(2 layers piled up)

Test speed: 200r/min

Load:196N

Test time:2h

Lubrication mode: Continuous lubrication

Lubricant: Kunlinlube® Antiwear Hydraulic Oil L-HM 46

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

Test Result:

Test Item	Test Result
Mass Wear Loss	0.0005g

Note:

1. Test specimens were cut from the sample.
2. The result was for reference only as dimension of the specimen did not meet the requirements specified in the standard.

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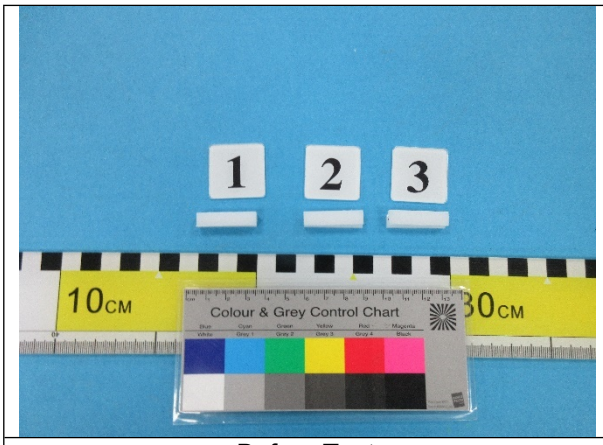
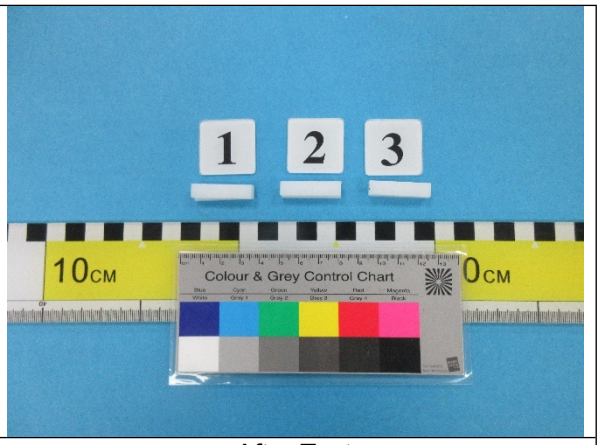
Test Photo:

	
Before Test	After Test

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Sliding Friction and Wear Testing Machine	TG-8200-P	POL-257	2023-09-18	2024-09-17

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8.Test Item: Charpy Double-Notched Impact Strength

Sample Description: Plastic part

Test Method: ISO 21304-2:2021 Annex C

Test Condition:

Specimen: 120mm×14.97mm×10mm (Notch preparation: machining)

The capacity of the pendulum: 50J

Span: 70mm

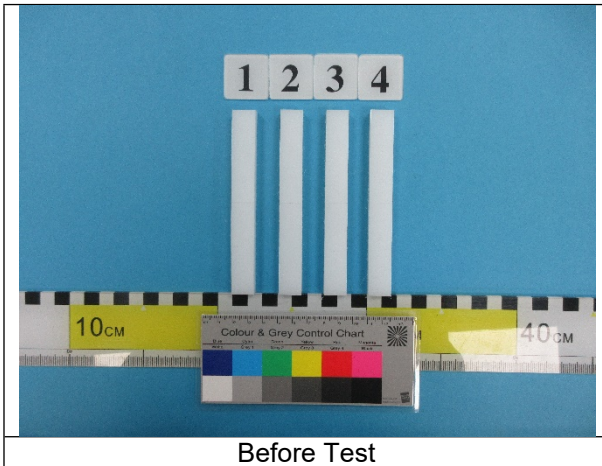
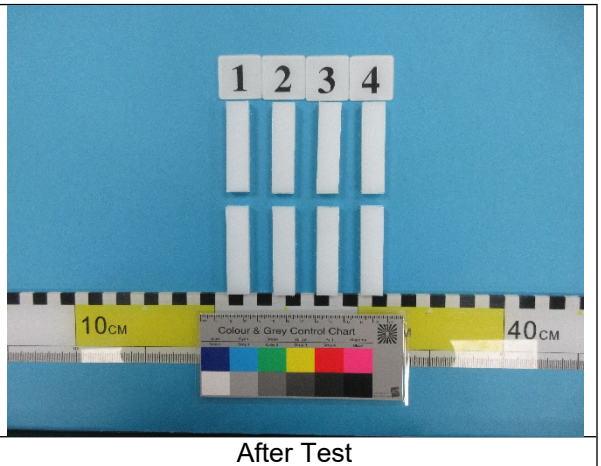
Lab Environmental Condition: (23±2)℃, (50±5)%RH

Test Result:

Test Item	Test Result
Charpy Double-Notched Impact Strength	119 kJ/m^2

Note: Test specimens were cut from the sample.

Test Photo:

	
Before Test	After Test

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Date : 2024-08-13

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Impact Tester	CEAST 9050	POL-076	2023-08-28	2024-08-27

Appendix information: The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc… and just for internal reference.

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

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