



国家化学建筑材料测试中心

NATIONAL
TEST CENTER
OF POLYMER AND
BUILDING MATERIALS



中国认可
国际互认
检测
TESTING
CNAS L1049

National Test Center of Polymer & Building Materials

Address: No. 14, Beisanhuandonglu, Chaoyang District, Beijing, China Post Code: 100013
Tel: +86(0)1064208747, +86(0)1064200694, +86(0)1064224642, +86(0)1059202479
Fax: +86(0)1059202784, +86(0)1084290301 Web site: www.plasticstest.net

No. 2023(X) 06185

CUSTOMER: Haoyang Environmental Co., Ltd

SAMPLES FOR TESTING

Name: 1.5mm double smooth HDPE geomembrane

Manufacturer: Haoyang Environmental Co., Ltd

Appearance: Black sheet

Thickness: 1.5mm

DATE OF RECEIPT: 2023-02-10

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THIS REPORT COMPRISES 5 PAGES.



DIRECTOR: 杨红浩

CHECK: 潘淑





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TESTING RESULTS

No. 2023(X) 06185

No.	Test Items	Requirements	Results	Test Methods
1	Thickness, mm	≥ 1.5	1.55	ASTM D 5199
2	Thickness limit deviation, mm	± 0.15	0.10	ASTM D 5199
3	Mass Per Unit Area g/m^2	-	1,423	ASTM D 5261
4	Appearance quality			
	Cutting ends	Straight edge and no visible sawtooth	Pass	
	Repair of perforation point	Not allowed	Pass	
	Mechanical (machining) scratches	No or not distinct	Pass	
	Gelosises	Not more than 10 gelosises per square meter, of which the diameter is no more than 2.0mm; no gelosises throughout the film thickness	Pass	
	Bubbles and impurity	Not allowed	Pass	
	Cracks, delamination, joints and broken ends	Not allowed	Pass	
5	Density, g/cm^3	≥ 0.940	0.9488	ASTM D 792

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Test: 王庆庆 游欢 赵彦霞 刘张硕

北京
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TESTING RESULTS

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(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test Methods	
6	Tensile yield strength, N/mm	transversal	≥22	31.7	ASTM D 6693
		longitudinal	≥22	29.7	ASTM D 6693
7	Tensile break strength, N/mm	transversal	≥40	44.5	ASTM D 6693
		longitudinal	≥40	44.3	ASTM D 6693
8	Elongation at yield, %	transversal	≥12	12.3	ASTM D 6693
		longitudinal	≥12	12.3	ASTM D 6693
9	Elongation at break, %	transversal	≥700	821	ASTM D 6693
		longitudinal	≥700	820	ASTM D 6693
10	Tear strength at 23±2°C,N	transversal	≥187	266	ASTM D 1004
		longitudinal	≥187	265	ASTM D 1004
11	Puncture resistance, N	≥480	720	ASTM D 4833	

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No.	Test Items	Requirements	Results	Test Methods	
12	Carbon black content, %	2.0~3.0	2.5	ASTM D 4218	
13	Linear dimensional change, @100°C for 1h, %	transversal	-	1.32	ASTM D 1204
		longitudinal	-	0.8	ASTM D 1204

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