



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. 2024(X) 01186

**CUSTOMER:** Haoyang Environmental Co., Ltd

## SAMPLES FOR TESTING

Name: 0.5mm double smooth HDPE geomembrane

Manufacturer: Haoyang Environmental Co., Ltd

Appearance: Black sheet

Thickness: 0.5mm

**DATE OF RECEIPT:** 2024-02-10

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**DIRECTOR:** 杨红浩

**CHECK:** 潘淑





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## TESTING RESULTS

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No.	Test Items	Requirements	Results	Test Methods
1	Thickness, mm	$\geq 0.5$	0.55	GB/T 17643-2011 GH-1
2	Appearance quality			
	Cutting ends	Straight edge and no visible sawtooth	Pass	GB/T 17643-2011 GH-1
	Repair of perforation point	Not allowed	Pass	GB/T 17643-2011 GH-1
	Mechanical (machining) scratches	No or not distinct	Pass	GB/T 17643-2011 GH-1
	Bubbles and impurity	Not allowed	Pass	GB/T 17643-2011 GH-1
	Cracks, delamination, joints and broken ends	Not allowed	Pass	GB/T 17643-2011 GH-1
3	Density, g/cm <sup>3</sup>	$\geq 0.939$	0.9488	GB/T 17643-2011 GH-1

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Test: 王庆庆 游欢 赵彦霞 刘张硕





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(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test Methods	
4	Tensile yield strength, N/mm	transversal	$\geq 7$	7.9	GB/T 17643-2011 GH-1
		longitudinal	$\geq 7$	8.5	GB/T 17643-2011 GH-1
5	Tensile break strength, N/mm	transversal	$\geq 10$	13.2	GB/T 17643-2011 GH-1
		longitudinal	$\geq 10$	13.9	GB/T 17643-2011 GH-1
6	Elongation at break, %	transversal	$\geq 600$	685	GB/T 17643-2011 GH-1
		longitudinal	$\geq 600$	698	GB/T 17643-2011 GH-1
7	Tear strength, N	transversal	$\geq 56$	68	GB/T 17643-2011 GH-1
		longitudinal	$\geq 56$	74	GB/T 17643-2011 GH-1
8	Puncture resistance, N	$\geq 120$	179	GB/T 17643-2011 GH-1	

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No.	Test Items	Requirements	Results	Test Methods
9	Stress crack resistance(nctf), h	transversal	$\geq 300$	300h without failure GB/T 17643-2011 GH-1
		longitudinal	$\geq 300$	300h without failure GB/T 17643-2011 GH-1
10	Carbon black content, %	2.0~3.0	2.4	GB/T 17643-2011 GH-1
11	Dispersion of carbon black, grade	9 in categories 1 or 2 and 1 in category 3	Category 1:8 Category 2:2	GB/T 17643-2011 GH-1
12	Oxidative inductive time, min	$\geq 60$	98	GB/T 17643-2011 GH-1
13	Air-oven aging at 85°C			GB/T 17643-2011 GH-1
	Retention rate of oxidative inductive time after 90h,%	$\geq 55$	63.0	



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