



国家化学建筑材料测试中心

NATIONAL
TEST CENTER
OF POLYMER AND
BUILDING MATERIALS



220020349451



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) 06186

CUSTOMER: Haoyang Environmental Co., Ltd

SAMPLES FOR TESTING

Name: 1.5mm single-textured 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: 杨红伟

CHECK: 潘颖





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TESTING RESULTS

No. 2023(X) 06186

No.	Test Items	Requirements	Results	Test Methods
1	Thickness, mm	/	1.44	CJ/T 234-2006 6.2
2	Thickness limit deviation, mm	±0.23	-0.09	CJ/T 234-2006 6.2
3	Thickness mean deviation, %	≥-5.0	-4.0	CJ/T 234-2006 6.2
4	Appearance quality			
	Cutting ends	Straight edge and no visible sawtooth	Pass	CJ/T 234-2006 6.4
	Repair of perforation point	Not allowed	Pass	CJ/T 234-2006 6.4
	Mechanical (machining) scratches	No or not distinct	Pass	CJ/T 234-2006 6.4
	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	CJ/T 234-2006 6.4
	Bubbles and impurity	Not allowed	Pass	CJ/T 234-2006 6.4
	Cracks, delamination, joints and broken ends	Not allowed	Pass	CJ/T 234-2006 6.4
Appearance	Uniform, no caking, defects	Pass	CJ/T 234-2006 6.4	
5	Density, g/cm ³	≥0.939	0.9480	CJ/T 234-2006 6.5

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Test: 王庆庆 游欢 赵彦霞 刘张硕

(京) 建筑材料测试中心 检验检测 2510





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(CONTINUED FROM THE PREVIOUS PAGE)

No.	Test Items	Requirements	Results	Test Methods	
6	Tensile yield strength, N/mm	transversal	≥ 22	24.7	CJ/T 234-2006 6.6
		longitudinal	≥ 22	24.9	CJ/T 234-2006 6.6
7	Tensile break strength, N/mm	transversal	≥ 16	36.1	CJ/T 234-2006 6.6
		longitudinal	≥ 16	35.5	CJ/T 234-2006 6.6
8	Elongation at yield, %	transversal	≥ 12	12	CJ/T 234-2006 6.6
		longitudinal	≥ 12	12	CJ/T 234-2006 6.6
9	Elongation at break, %	transversal	≥ 100	814	CJ/T 234-2006 6.6
		longitudinal	≥ 100	802	CJ/T 234-2006 6.6
10	Tear strength, N	transversal	≥ 187	234	CJ/T 234-2006 6.7
		longitudinal	≥ 187	232	CJ/T 234-2006 6.7
11	Puncture resistance, N	≥ 400	602	CJ/T 234-2006 6.8/ Appendix B	

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TESTING RESULTS

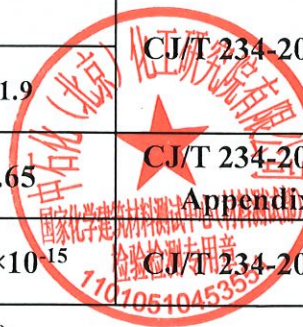
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No.	Test Items	Requirements	Results	Test Methods	
12	Stress crack resistance (NCTL), h	transversal	≥ 300	300h without failure	CJ/T 234-2006 6.9/ Appendix C
		longitudinal	≥ 300	300h without failure	CJ/T 234-2006 6.9/ Appendix C
13	Carbon black content, %	2.0~3.0	2.5	CJ/T 234-2006 6.10	
14	Dispersion of carbon black, grade	9 in categories 1 or 2 and 1 in category 3	Category 1:6 Category 2:4	CJ/T 234-2006 6.11/ Appendix D	
15	Oxidative inductive time, min	≥ 100	124	CJ/T 234-2006 6.12	
16	Air-oven aging at 85°C			CJ/T 234-2006 6.13	
	Retention rate of oxidative inductive time after 90d, %	≥ 55	55.3		
17	UV resistance				
	Retention rate of oxidative inductive time after 1600h, %	≥ 50	51.9	CJ/T 234-2006 6.14	
18	Asperity height, mm	≥ 0.25	0.65	CJ/T 234-2006 6.15 Appendix F	
19	Water vapor transmission, g·cm/(cm ² ·s·Pa)	$\leq 1.0 \times 10^{-13}$	3.4×10^{-15}	CJ/T 234-2006 6.16	

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No.	Test Items	Requirements	Results	Test Methods	
20	Brittleness temperature (-70°C)	Pass (More than 25 out of 30 specimens do not fail)	no specimen failed	CJ/T 234-2006 6.17	
21	Linear change, %	transversal	±2	-0.09	CJ/T 234-2006 6.18
		longitudinal	±2	-0.43	CJ/T 234-2006 6.18
Note: Test items 1~13, 15~21 were conducted at Tongzhou branch, test item 14 was conducted at Chaoyang branch.					

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