



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. WT2023-188

CUSTOMER: Haoyang Environmental Co., Ltd

SAMPLES FOR TESTING

Name: 2mm Single-texture HDPE geomembrane

Manufacturer: Haoyang Environmental Co., Ltd

Appearance: Black sheet

Thickness: 2mm

DATE OF RECEIPT:



ISSUE DATE:

THIS REPORT COMPRISES 5 PAGES

DIRECTOR: 杨红皓

CHECK: 潘焱





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Test report

Report number: WT2023-188

Total 3 pages, Page 1

Product name	Single-texture HDPE geomembrane	Inspection category	Entrusted inspection
Entrusted unit	Haoyang Environmental Co.,Ltd	Specification and model	GH-2T19000/2.0 GB /T17643-2011
Production unit	Haoyang Environmental Co.,Ltd	Sample level	/
The number of samples	9m×1m	Sample number	WTYP2023HDPE188
Sample delivery personnel	Zhang Zhengmin	Sample receipt date	2023.06.12
Sample product Characteristics and status	Flat and undamaged	Sample collection location	Business hall
Inspection conditions	23°C,55%RH	Date of inspection	2023.06.13- 2023.10.07
The basis of inspection	GB/T 17643-2011 《Geosynthetics Polyethylene Geomembrane 》		
Inspection requirements	Roughness height, tensile yield strength, tensile breaking strength, yield elongation, elongation at break, right-angle tear load, puncture resistance, atmospheric oxidation induction time, water vapor permeability, dimensional stability, low-temperature impact embrittlement performance, tensile load stress cracking time, carbon black dispersion, 85°C heat aging (normal pressure OIT retention rate after 90d), UV resistance (OIT retention rate after 1600h of UV irradiation).		
Test conclusion	After inspection, all the inspected items meet the technical requirements of GB/T 17643-2011 "Geosynthetics Polyethylene Geomembrane".		
Complete Pour	Only responsible for samples.	Report issuance date (stamp):	

Chief Inspector: 纪艳玲

Review: 孟红红

Approval: 裴荣庆

Date: 2023/10/7

Date: 2023/10/7

Date: 2023/10/7



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Test report

Report number: WT2023-188

Total 3 pages, Page 2

Serial number	Inspection items		Technical indicators	Test results	Single item evaluation
1	Rough height (Mm)		≥ 0.25	0.40	Pass
2	Tensile yield strength(N/mm)	From south to north	≥ 29	31.5	Pass
		Crosswise	≥ 29	32.1	Pass
3	Tensile breaking strength(N/mm)	From south to north	≥ 21	55.8	Pass
		Crosswise	≥ 21	57.1	Pass
4	Elongation at yield(%)	From south to north	≥ 12	12.0	Pass
		Crosswise	≥ 12	12.1	Pass
5	Elongation at break(%)	From south to north	≥ 100	716	Pass
		Crosswise	≥ 100	740	Pass
6	Right-angle tear load(N)	From south to north	≥ 250	272	Pass
		Crosswise	≥ 250	269	Pass
7	Puncture resistance (N)		≥ 535	736	Pass
8	Water vapor permeability (g*cm/(cm ² *s*Pa))		$\leq 1.0 \times 10$	5.3×10	Pass
9	Tensile load stress Cracking (h)	From south to north	≥ 300	Unbroken	Pass
		Crosswise	≥ 300	Unbroken	Pass
Complete Pour	Only responsible for samples.				

化工研究所
测试中心(材料)专用章
04535



Chief Inspector: 纪艳玲

Review: 孟红红

Approval:

Date: 2023/10/7

Date: 2023/10/7

Date: 2023/10/7



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Test report

Report number: WT2023-188

Total 3 pages, Page 3

Serial number	Inspection items	Technical indicators	Test results	Single item evaluation	
10	Carbon black dispersion	There is no more than 1 level 3 data among 10 data, and level 4 and level 5 data are not allowed	There are 6 level 1 data and 4 level 2 data among 10 data	Pass	
11	Oxidation induction time at normal pressure (OIT)	≥ 100	136	Pass	
12	Dimensional stability (%)	From south to north	± 2	-0.4	Pass
		Crosswise	± 2	-0.6	Pass
13	Low-temperature impact embrittlement performance	Pass	Pass	Pass	
14	85°C oven aging (retention rate of standard OIT after baking for 90 days) (%)	≥ 55	55.6	Pass	
15	Ultraviolet resistance (retention rate of standard OIT after ultraviolet irradiation for 1600 hours) (%)	≥ 50	50.3	Pass	
Complete Pour	Only responsible for samples.				

Chief Inspector: 纪艳玲

Review: 孟红红

Approval: [Signature]

Date: 2023/0.7

Date: 2023/0.7

Date: 2023/0.7

