

Ordinary high density polyethylene geomembrane specifications and standards

Ordinary high density polyethylene geomembrane(GB/T 176543-2011 GH-1type)

Number	Item	Value								
		0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1	Density g/cm ³	≥0.940								
2	Tensile yield strength (MD and CD) N/mm	≥4	≥7	≥10	≥13	≥16	≥20	≥26	≥33	≥40
3	Tensile break strength(MD and CD)N/mm	≥6	≥10	≥15	≥20	≥25	≥30	≥40	≥50	≥60
4	Elongation at yield(MD and CD)N/mm	—	—		≥11					
5	Elongation at break(MD and CD)%	≥600								
6	Tear resistance(MD and CD)%	≥34	≥56	≥84	≥115	≥140	≥170	≥225	≥280	≥340
7	Puncture strength N	≥72	≥120	≥180	≥240	≥300	≥360	≥480	≥600	≥720
8	Carbon blank content %	2.0 ~ 3.0								
9	Carbon black dispersion	There are no more than 1 in the 10 data,no 4 or 5								
10	Normal pressure oxidation induction time min	≥60								
11	Low temperature impact brittleness	Get through								

12	Water vapor permeability g-cm/(cm ² -s-Pa)	≤1.0×10 ⁻¹ :
13	Dimensional stability %	±2.0

Environmental protection with rough high density polyethylene geomembrane(GB/T 176543-2011 GH-2TI.GH-2T2type)

Number	Item	Value						
	Thickness mm	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1	Density g/cm ³	≥0.940						
2	Rough height mm	≥0.25						
3	Tensile yield strength (MD and CD)N/mm	≥11	≥15	≥18	≥22	≥29	≥37	≥44
4	Tensile break strength (MD and CD)N/mm	≥8	≥10	≥13	≥16	≥21	≥26	≥32
5	Elongation at yield (MD and CD)N/mm	≥12						
6	Elongation at break(MD and CD) %	≥100						
7	Tear resistance(MD and CD)%	≥93	≥125	≥160	≥190	≥250	≥315	≥375
8	Puncture strength N	≥200	≥270	≥335	≥400	≥535	≥670	≥800
9	Tensile stress cracking (incision constant load stretching)h	≥300						
10	Carbon blank content %	2.0~3.0						
11	Carbon black dispersion	There are no more than 1 in the 10 data, no 4 or 5.						

12	Oxidation induction time min min	Normal pressure oxidation induction time ≥ 100
		High pressure oxidation induction time \geq 400
13	Oven aging at 85 °C, (Standard OIT (min. ave.) - retained after 90 days) %	≥ 55
14	UV Resistance (High Pressure OIT (min. ave.) - retained after 1600 hrs) %	≥ 50
<p>Note: Technical performance indicator requirements for thickness specifications not listed in the table shall be implemented in accordance with the interpolation method.</p>		
<p>In the 10 tests for index item 2, the results of 8 tests should be greater than 0.18mm, and the minimum value should be greater than 0.13mm.</p>		
<p>For index items 13 and 15, either the normal pressure OIT (retention rate) or the high pressure OIT (retention rate) can be selected for testing.</p>		