

G-Meb® HDPE Series HDPE geomembrane (Textured), the full name of which is "high-density polyethylene geomembrane", is a plastic sheet and roll made of high-density polyethylene resin through blow molding and calendaring technology, with a rough surface. HDT Series features outstanding physical and mechanical properties, high tear resistance, strong deformation adaptability, puncture resistance, anti-aging, UV resistance, large friction coefficient, and obvious anti-slip function. The advantages are: high anti-seepage coefficient, good heat resistance and cold resistance, chemical stability, acid and alkali resistance, high tensile strength, anti-slip function, convenient for direct welding of geomembrane, suitable for steep slopes and vertical anti-seepage, and improving the stability of the project. It is widely applied in anti-seepage projects such as landfill sites, river embankments, tailings DAMS, subways, tunnels, and sewage treatment plants. Its engineering advantages are particularly obvious in geological features with steep slopes and verticality.

Properties (Standard)	Value Type	Unit	HDT0.75	HDT1.0	HDT1.25	HDT1.5	HDT2.0	HDT2.5	HDT3.0
Mechanical Properties									
Thickness	Mav	mm	0.75	1.00	1.25	1.50	2.00	2.50	3.00
• lowest individual for 8 out of 10 values [D 5994]	Tolerance	%	-10	-10	-10	-10	-10	-10	-10
• lowest individual for any of the 10 values [D 5994]	Tolerance	%	-15	-15	-15	-15	-15	-15	-15
Asperity Height mils [D 7466]	Mav	mm	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Formulated Density [D 1505/D 792]	Mav	g/cc	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Tensile Properties (1)	Mav								
• yield strength [D 6693 Type IV]		kN/m	11	15	18	22	29	37	44
• yield elongation [D 6693 Type IV]		%	12	12	12	12	12	12	12
• break strength [D 6693 Type IV]		kN/m	8	10	13	16	21	26	32
•break elongation [D 6693 Type IV]		%	100	100	100	100	100	100	100
Tear Resistance [D 1004]	Mav	N	93	125	156	187	249	311	374
Puncture Resistance [D 4833]	Mav	N	200	267	333	400	534	667	800
Carbon Black Content (range) [D 4218 (2)]	Mav	%	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
Oxidative Induction Time (OIT) (3)	Mav								
(a) Standard OIT [D 8177]		min	100	100	100	100	100	100	100
(b) High Pressure OIT[D 5885]		min	400	400	400	400	400	400	400
Oven Aging at 85°C [D 5721] (3) (4)	Mav								
(a) Standard OIT - % retained after 90 days [D 8117]		%	55	55	55	55	55	55	55
(b) High Pressure OIT- % retained after 90 days [D5885]		%	80	80	80	80	80	80	80
UV Resistance [D 7238] (5)	Mav	%	50	50	50	50	50	50	50
High Pressure OIT retained after 1600 hrs (6) [D 5885]									
Physical Identification Properties									
Thickness [D 5994]	T	mm	0.75	1.00	1.25	1.50	2.00	2.50	3.00
Roll Width	T	m(<=)	7	7	7	7	5.9	5.9	5.9
Roll Length	T	m	60	50	45	40	35	30	25
Approx Load Q'ty / 40' HQ		Rolls(>=)	74	66	60	55	55	52	50
		Sq. m	31,080	23,100	18,900	15,400	11,358	9,204	7,375

(1) Machine direction (MD) and cross machine direction (XMD) average values is on the basis of 5 test specimens each direction.

Yield elongation is calculated using a gage length of 33 mm

Break elongation is calculated using a gage length of 50 mm

(2) D 1603 (tube furnace) or D 6370 (TGA) are acceptable if an appropriate correlation to D 4218 (muffle furnace) can be established.

(3) Can select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.

(4) It is also recommended to evaluate samples at 30 and 60 days to compare with the 90 day response.

(5) The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.

(6) UV resistance is based on percent retained value regardless of the original HP-OIT value.

Above the values listed are the minimum average values, the data was obtained from in-house test laboratory, National test institutes and international test institutes. GeoTrans keeps the right of data changes and the final explanation right. Liability Exclusion: This publication should not be construed as engineering advice. While information contained here is accurate to the best of our knowledge, GeoTrans does not warrant its accuracy or completeness. The only warranty made by GeoTrans for its products is set forth in our Product Test Report accompanies our shipment of the products, or such other written warranty as may be agreed by GeoTrans and customer. GeoTrans specifically disclaims all other warranties express or implied, including without agreed by GeoTrans and customer. GeoTrans specifically disclaims all other warranties, express or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, or rising from provision of samples, a course of dealing or usage of trade.



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