

# GEO HT - High Temperature Geomembrane

## Technical Data Sheet



HYMA PLASTIC  
SINCE 1975

Hyma GEO HT Geomembranes are made of high quality virgin polyethylene which demonstrates excellent chemical resistance. GEO HT are designed with special high performance raw materials and additives in order to maintain mechanical & physical properties at temperatures up to 100 °C.

Test Property	Unit	Test Method	Value (*)			
Thickness (1)	mm	ASTM D-5199	1.5	2.0	2.5	3.0
Density	g/cm <sup>3</sup>	ASTM D-792	≥0.94	≥0.94	≥0.94	≥0.94
Strength at Yield (Both directions)	N/mm	ASTMD-638/6693 Type IV 50mm/min l <sub>o</sub> = 33mm For Yield l <sub>o</sub> = 50mm For Break	22	30	37	44
Elongation at Yield (Both directions)	%		12	12	12	12
Strength at Break (Both directions)	N/mm		40	53	67	80
Elongation at Break (Both directions)	%		600	600	600	600
Tear Resistance	N	ASTM D-1004	190	250	315	375
Puncture Resistance	N	ASTM D-4833	480	640	800	960
Carbon Black Content	%	ASTM D-1603	2-3	2-3	2-3	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2	1 or 2	1 or 2	1 or 2
Oxidative Induction Time (OIT)	Min.	ASTM D-3895 200°C, O <sub>2</sub> , 1atm.	≥ 160	≥ 160	≥ 160	≥ 160
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885 150°C, 3.4MPa	≥ 400	≥ 400	≥ 400	≥ 400
Tensile Properties @100°C	MPa	ASTM D 6693 Type IV	≥5	≥5	≥5	≥5
100°C Oven Aging Standard HPOIT % retained after 90 Days	%	ASTM D-5721/ D5885 (modified)	≥ 90	≥ 90	≥ 90	≥ 90
Stress Crack Resistance @80°C	H	ASTM D-5397 (modified)	≥ 500	≥ 500	≥ 500	≥ 500
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 80	≥ 80	≥ 80	≥ 80
Roll Width (approx.) (4)	m	----	5.8 – 6 – 7			
Roll Length (approx.) (4)	m	----	50 – 75 – 100 – 125 – 150			
Surface	----	----	Double-sided Smooth			

(\*) All Values unless stated otherwise are nominal values.

(1) Tolerance ±10% of the nominal thickness.

(2) Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be category 1 or 2. No more than 1 view from category 3.

(3) Test-Conditions: 20 hours UV cycle at 75°C followed by 4 hours condensation at 60°C.

(4) Roll Width and Lengths have a tolerance of ±1%.

