

GEO HD PREMIUM - HDPE Smooth Premium Geomembrane

Technical Data Sheet



HYMA PLASTIC
SINCE1975

Hyma GEO HD PREMIUM is a smooth high quality sheet, manufactured from pure HDPE virgin polymer, made for Geomembrane applications. GEO HD PREMIUM contains 97-97.5% Polyethylene, 2-2.5% Carbon Black, and traces of antioxidants and heat stabilizers. This product is double-sided smooth. The product's specifications exceed GRI GM13.

Test Property	Unit	Test Method	Value (*)
Thickness (1)	mm	ASTM D-5199	1
Density	g/cm ³	ASTM D-792	≥0.94
Strength at Yield (Both directions)	N/mm		18
Elongation at Yield (Both directions)	%	ASTMD-638/6693 Type IV 50mm/min l _o = 33mm For	14
Strength at Break (Both directions)	N/mm	Yield l _o = 50mm For Break	33
Elongation at Break (Both directions)	%		800
Tear Resistance	N	ASTM D-1004	160
Puncture Resistance	N	ASTM D-4833	380
Carbon Black Content	%	ASTM D-1603	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2
Oxidative induction time (OIT)	Min.	ASTM D-3895	≥ 100
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885	≥ 400
Oven Aging Standard OIT % retained after 90 Days	%	ASTM D-5721/ D3895 @ 85°C	≥ 55
Stress Crack Resistance (NCTL)	H	ASTM D-5397	≥ 500
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 50
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 lowest individual reading.

(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%.

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Test Property	Unit	Test Method	Value (*)
Thickness (1)	mm	ASTM D-5199	1.5
Density	g/cm ³	ASTM D-792	≥0.94
Strength at Yield (Both directions)	N/mm		26
Elongation at Yield (Both directions)	%	ASTMD-638/6693 Type IV 50mm/min l ₀ = 33mm For	14
Strength at Break (Both directions)	N/mm	Yield l ₀ = 50mm For Break	46
Elongation at Break (Both directions)	%		800
Tear Resistance	N	ASTM D-1004	220
Puncture Resistance	N	ASTM D-4833	550
Carbon Black Content	%	ASTM D-1603	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2
Oxidative induction time (OIT)	Min.	ASTM D-3895	≥ 100
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885	≥ 400
Oven Aging Standard OIT % retained after 90 Days	%	ASTM D-5721/ D3895 @ 85°C	≥ 55
Stress Crack Resistance (NCTL)	H	ASTM D-5397	≥ 500
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 50
Roll Width (approx.) (4)	m	----	5.8 – 6 – 7
Roll Length (approx.) (4)	m	----	50 – 75 – 100 – 125 – 150
Surface	----	----	Double-sided Smooth

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Test Property	Unit	Test Method	Value (*)
Thickness (1)	mm	ASTM D-5199	2
Density	g/cm ³	ASTM D-792	≥0.94
Strength at Yield (Both directions)	N/mm		34
Elongation at Yield (Both directions)	%	ASTMD-638/6693 Type IV 50mm/min l ₀ = 33mm For	14
Strength at Break (Both directions)	N/mm	Yield l ₀ = 50mm For Break	60
Elongation at Break (Both directions)	%		800
Tear Resistance	N	ASTM D-1004	300
Puncture Resistance	N	ASTM D-4833	700
Carbon Black Content	%	ASTM D-1603	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2
Oxidative induction time (OIT)	Min.	ASTM D-3895	≥ 100
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885	≥ 400
Oven Aging Standard OIT % retained after 90 Days	%	ASTM D-5721/ D3895 @ 85°C	≥ 55
Stress Crack Resistance (NCTL)	H	ASTM D-5397	≥ 500
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 50
Roll Width (approx.) (4)	m	----	5.8 – 6 – 7
Roll Length (approx.) (4)	m	----	50 – 75 – 100 – 125 – 150
Surface	----	----	Double-sided Smooth

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