

GEO LL - LLDPE Smooth Geomembrane

Technical Data Sheet



HYMA PLASTIC
SINCE 1975

Hyma GEO LL is a smooth high quality sheet, manufactured from pure LLDPE virgin polymer, made for flexible Geomembrane applications where increased friction resistance is needed. GEO LL 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 meet GRI GM17.

Test Property	Unit	Test Method	Value (*)		
Thickness (1)	mil	ASTM D-5199	20	30	40
Density	g/cm ³	ASTM D-792	≤ 0.939	≤ 0.939	≤ 0.939
Strength at Break (Both directions)	lb/in- width	ASTM D 6693 Type IV Dumbbell, 2 ipm G.L. 2.0 in	74	114	152
Elongation at Break (Both directions)	%		800	800	800
Tear Resistance	lb	ASTM D-1004	11	15	22
Puncture Resistance	lb	ASTM D-4833	27	42	56
Carbon Black Content	%	ASTM D-1603	2-3	2-3	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	Note (2)		
Oxidative Induction Time (OIT)	Min.	ASTM D-3895	≥ 100	≥ 100	≥ 100
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885	≥ 400	≥ 400	≥ 400
Oven Aging Standard OIT % retained after 90 Days	%	ASTM D-5721/ D3895 @ 185°F	≥ 35	≥ 35	≥ 35
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 35	≥ 35	≥ 35
Roll Width (approx.) (4)	ft	----	19 - 23		
Roll Length (approx.) (4)	ft	----	164 -246 - 328		
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%.

GEO LL - LLDPE Smooth Geomembrane

Technical Data Sheet



HYMA PLASTIC
SINCE 1975

Hyma GEO LL is a smooth high quality sheet, manufactured from pure LLDPE virgin polymer, made for flexible Geomembrane applications where increased friction resistance is needed. GEO LL 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 meet GRI GM17.

Test Property	Unit	Test Method	Value (*)		
Thickness (1)	mil	ASTM D-5199	50	60	80
Density	g/cm ³	ASTM D-792	≤ 0.939	≤ 0.939	≤ 0.939
Strength at Break (Both directions)	lb/in-width	ASTM D 6693 Type IV Dumbbell, 2 ipm G.L. 2.0 in	188	228	304
Elongation at Break (Both directions)	%		800	800	800
Tear Resistance	lb	ASTM D-1004	27	33	44
Puncture Resistance	lb	ASTM D-4833	69	84	112
Carbon Black Content	%	ASTM D-1603	2-3	2-3	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	Note (2)		
Oxidative Induction Time (OIT)	Min.	ASTM D-3895	≥ 100	≥ 100	≥ 100
High Pressure Oxidative induction Time (HPOIT)	Min.	ASTM D-5885	≥ 400	≥ 400	≥ 400
Oven Aging Standard OIT % retained after 90 Days	%	ASTM D-5721/ D3895 @ 185°F	≥ 35	≥ 35	≥ 35
UV Resistance HPOIT (3) Retained after 1600 Hours	%	ASTM D-7238 ASTM D-5885	≥ 35	≥ 35	≥ 35
Roll Width (approx.) (4)	ft	----	19 - 23		
Roll Length (approx.) (4)	ft	----	164 -246 - 328		
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%.