

# GEO HD X – HDPE Smooth Geomembrane

## Technical Data Sheet



HYMA PLASTIC  
SINCE 1975

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

Test Property	Unit	Test Method	Value (*)			
Nominal Thickness (1)	mm	ASTM D-5199	0.5	0.75	1	1.25
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 lo = 33mm For Yield lo = 50mm For Break	6	9	13	15
Elongation at Yield (Both directions)	%		12	12	12	12
Strength at Break (Both directions)	N/mm		10	15	20	25
Elongation at Break (Both directions)	%		700	700	700	700
Tear Resistance	N	ASTM D-1004	65	78	100	130
Puncture Resistance	N	ASTM D-4833	160	196	265	320
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
Dimension Stability	%	ASTM D-1204 100°C – 1 Hr	±2	±2	±2	±2
Melt Flow Index	gm/10min	ASTM D-1238 190°C – 2.16 Kg	≤ 1	≤ 1	≤ 1	≤ 1
Roll Width (approx.) (3)	m	----	5.8 – 6 – 7			
Roll Length (approx.) (3)	m	----	50 – 75 – 100 – 125 – 150			
Surface	----	----	Double-sided Smooth			

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

(1) Minimum average thickness = -10% of 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) 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	2.0	2.5
Density	g/cm <sup>3</sup>	ASTM D-792	≥0.94	≥0.94	≥0.94
Strength at Yield (Both directions)	N/mm	ASTMD-638/6693 Type IV 50mm/min lo = 33mm For Yield lo = 50mm For Break	20	25	33
Elongation at Yield (Both directions)	%		12	12	12
Strength at Break (Both directions)	N/mm		34	42	54
Elongation at Break (Both directions)	%		700	700	700
Tear Resistance	N		ASTM D-1004	165	210
Puncture Resistance	N	ASTM D-4833	410	530	680
Carbon Black Content	%	ASTM D-1603	2-3	2-3	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2	1 or 2	1 or 2
Dimension Stability	%	ASTM D-1204 100°C – 1 Hr	±2	±2	±2
Melt Flow Index	gm/10min	ASTM D-1238 190°C – 2.16 Kg	≤ 1	≤ 1	≤ 1
Roll Width (approx.) (3)	m	----	5.8 – 6 – 7		
Roll Length (approx.) (3)	m	----	50 – 75 – 100 – 125 – 150		
Surface	----	----	Double-sided Smooth		

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

(1) Minimum average thickness = -10% of 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) Roll Width and Lengths have a tolerance of ±2%.



# GEO HD X - HDPE Textured Geomembrane

## Technical Data Sheet



HYMA PLASTIC  
SINCE 1975

Hyma GEO HD X Textured Geomembrane is a high quality sheet, manufactured from pure HDPE virgin polymer, made for Geomembrane applications. GEO HD X Textured Geomembrane contains 97-97.5% Polyethylene and 2-2.5% Carbon Black, and traces of antioxidants and heat stabilizers.

This product is available as single textured or double textured forms.

Test Property	Unit	Test Method	Minimum Average Value (*)		
Thickness (1) (Lowest individual values)	mm	ASTM D-5994	1.0 -15%	1.5 -15%	2.0 -15%
Density	g/cm <sup>3</sup>	ASTM D-792	≥0.94	≥0.94	≥0.94
Strength at Yield (Both directions)	N/mm	ASTMD-638/6693 Type IV 50mm/min lo = 33mm For Yield lo = 50mm For Break	11	17	22
Elongation at Yield (Both directions)	%		12	12	12
Strength at Break (Both directions)	N/mm		8	12	16
Elongation at Break (Both directions)	%		100	100	100
Tear Resistance	N	ASTM D-1004	95	150	200
Puncture Resistance	N	ASTM D-4833	200	300	400
Carbon Black Content	%	ASTM D-1603	2-3	2-3	2-3
Carbon Black Dispersion (2)	Category	ASTM D-5596	1 or 2	1 or 2	1 or 2
Dimension Stability	%	ASTM D-1204 100°C – 1 Hr	±2	±2	±2
Melt Flow Index	gm/10min	ASTM D-1238 190°C – 2.16 Kg	≤ 1	≤ 1	≤ 1
Roll Width (approx.) (3)	m	----	5.8 – 6 – 7		
Roll Length (approx.) (3)	m	----	50 – 75 – 100 – 125 – 150		
Surface	----	----	Single or Double-sided Textured		

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

(1) Minimum average thickness = -10% of the lowest individual values.

(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) Roll Width and Lengths have a tolerance of ±2%.

