



Hdpe Geomembrane Smooth Technical Data





Item	Properties	Unit	Test Method	Thickness				
				0.75	1.0	1.25	1.5	2.0
1	Thickness	mm	D5199	-10%	-10%	-10%	-10%	-10%
2	Density	g/cm3	D1505/D792	0.94	0.94	0.94	0.94	0.94
3	Tensile properties		D6693					
	Yield strength	N/mm	Type IV	11	15	18	22	29
	Break strength	N/mm		20	27	33	40	53
	Yield elongation	%		12	12	12	12	12
	Break elongation	%		700	700	700	700	700
4	Tear Resistance(min.ave.)	N	D1004	93	125	160	190	250
5	Puncture resistance	N	D4833	240	320	400	480	640
6	Stress crack resistance	Hrs	D5397	300				
7	Carbon black content(range)	%	D1603	2.0-3.0				
	Carbon black dispersion		D5596	Carbon black dispersion(only near spherical agglomerates) for 10 different views:9 in categories 1 or 2 and 1 in category 3.				
8	Oxidation Induction Time(OIT)							
	Standard OIT	min	D3895	100				
	High pressure OIT	min	D5885	400				
9	Oven aging at 85°C		D5721					
	Standard OIT(min.ave.)-% retained after 90 days	%	D3895	55				
	High pressure OIT(min.ave.)-% retained after 90 days	%	D5885	80				
	UV resistance							
10	Standard OIT (min.ave.)-%	%	D3895	50				
	High pressure OIT (min.ave.)-% retained after 1600 hrs	%	D5885	50				



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Item	Properties	Unit	Test Method	Thickness				
				0.75	1.0	1.25	1.5	2.0
1	Thickness	mm	D5994	-10 %	-10 %	-10 %	-10 %	-10 %
2	Asperity Height	mm	D7466	0.25	0.25	0.25	0.25	0.25
3	Density	g/cm ³	D1505/D79 2	0.94	0.94	0.94	0.94	0.94
4	Tensile properties		D6693					
	Yield strength	N/mm	Type IV	11	15	18	22	29
	Break strength	N/mm		8	10	13	16	21
	Yield elongation	%		12	12	12	12	12
	Break elongation	%		700	700	700	700	700
5	Tear Resistance(min.ave.)	N	D1004	93	125	160	190	250
6	Puncture resistance	N	D4833	200	270	335	400	535
7	Stress crack resistance	Hrs	D5397	300				
8	Carbon black Carbon black content(range)	%	D1603	2.0-3.0				
	Carbon black dispersion		D5596	Carbon black dispersion(only near spherical agglomerates) for 10 different views:9 in categories 1 or 2 and 1 in category 3.				
9	Oxidation Induction Time(OIT)							
	Standard OIT	min	D3895	100				
	High pressure OIT	min	D5885	400				
10	Oven aging at 85°C Standard		D5721					
	OIT(min.ave.)-% retained after 90 days	%	D3895	55				
	High pressure OIT(min.ave.)-% retained after 90 days	%	D5885	80				
	UV resistance							
11	Standard OIT (min.ave.)-%	%	D3895	50				
	High pressure OIT (min.ave.)-% retained	%	D5885	50				



after 1600 hrs				
12	-70°C Low temperature brittleness properties	/		Pass
13	Water vapor permeability	g.cm(cm2.s .Pa)	/	$\leq 1.0 \cdot 10^{-13}$
14	Dimensional Stability	%	/	± 2