



GSE UltraFlex Textured

Product Data Sheet

GSE UltraFlex Textured is a coextruded double-sided or single-sided textured, black, high quality, linear low density polyethylene (LLDPE) geomembrane, produced from specially formulated polyethylene resin. The polyethylene resin is designed specifically for flexible geomembrane applications. GSE UltraFlex Textured contains approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers. This combination of characteristics creates a geomembrane designed for improved elongation and puncture resistance making it an excellent choice for landfill caps, leach pads and other applications where differential settlement is expected and enhanced interface friction is required. GSE UltraFlex Textured has excellent resistance to UV radiation and is suitable for exposed applications. These product specifications meet or exceed GRI-GM 17.

Tested Property	Unit	Test Method	Values		
Thickness ^(a) (Core Thickness)	mm	ASTM D 5994	1.0	1.5	2.0
Density	g/cm ³	ASTM D 792	≤ 0.939	≤ 0.939	≤ 0.939
Tensile Properties (each Direction) (Minimum Average)		ASTM D 638 / D 6693 type IV; 200 mm/min; lo = 50 mm)			
Strength at Break	N/mm		12	18	24
Elongation at Break	%		250	250	250
Tear Resistance (Minimum Average)	N	ASTM D 1004	100	150	200
Puncture Resistance (Minimum Average)	N	ASTM D 4833	200	300	400
Carbon Black Content	%	ASTM D 1603	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0
Carbon Black Dispersion	Category	ASTM D 5596	1 / 2 ^(b)	1 / 2 ^(b)	1 / 2 ^(b)
Dimensional Stability (each Direction)	%	ASTM D 1204 (100 °C/1h)	± 2	± 2	± 2
Melt Flow Index ^(c)	g/10 min	ASTM D 1238 (190 °C / 5.0 kg) (190 °C / 2.16 kg)	≤ 3.0 ≤ 1.0	≤ 3.0 ≤ 1.0	≤ 3.0 ≤ 1.0
Asperity Height (each Side) (Minimum Average)	mm	GRI-GM 12	0.25 ^(d)	0.25 ^(d)	0.25 ^(d)
Oxidative Induction Time (OIT)	min	ASTM D 3895 (200°C; Pure O ₂ ; 1 atm)	≥ 100	≥ 100	≥ 100
Reference Property	Unit	Test Method	Values		
Multiaxial Elongation at Break	%	similar to ASTM D 5617 ; Ø = 500 mm	≥ 30	≥ 30	≥ 30
Low Temperature Brittleness	°C	ASTM D 746	- 77	- 77	- 77
UV Resistance ^(e)		GRI-GM 11			
HP-OIT retained after 1,600 hours ^(f)	%	ASTM D 5885	≥ 35	≥ 35	≥ 35
Roll Width (approx.) ^(g)	m	---	6.95		
Surface	---	---	single-sided or double-sided coextruded textured		

- (a): Minimum Average: - 5%, lowest individual for 8 out of 10: - 10%, lowest individual: - 15% - Special thickness available upon request.
- (b): 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.
- (c): Standard test conditions: 190 °C / 5.0 kg.
- (d): 8 out of 10 readings must be ≥ 0.18 mm and lowest individual must be ≥ 0.13 mm.
- (e): Test conditions: 20 hours UV cycle at 75°C followed by 4 hours condensation at 60°C; total: 1,600 hours.
- (f): UV Resistance is based on percent retained value regardless of the original High Pressure - OIT value.
- (g): Roll widths and lengths have a tolerance of ± 1%.



GSE UltraFlex Textured is produced at GSE Rechlin plant, Germany.



This information is provided for reference purposes only and is not intended as a warranty or guarantee. GSE assumes no liability in connection with the use of this information. Please check with GSE for current, standard minimum quality assurance procedures. This information is subject to change without prior notice. Please contact GSE for updated information.

1213-CPD-3880

Europe, CIS & Africa Headquarters
GSE Lining Technology GmbH
 Normannenweg 28
 20537 Hamburg
 Germany
 Tel.: +49 40 76742-0
 Fax: +49 40 76742-34
 e-mail: europe@gseworld.de

Corporate Headquarters
GSE Lining Technology, Inc.
 19103 Gundle Road
 Houston, Texas 77073
 USA
 Tel: +1 281 443-8564
 Fax: +1 281 875-6010

Other Production facilities & Sales Offices
 United Kingdom Thailand
 Russia Egypt
 Turkey Chile
 Australia



09-11-02-UFB-Tex-10/20-ASTM-E

Visit us at www.gseworld.com
 A Gundle/SLT Environmental, Inc. Company