



GSE STANDARD PRODUCTS

# Product Data Sheet

## GSE UltraFlex Textured Geomembranes (Single-Sided)

GSE UltraFlex Textured is the coextruded textured version of GSE UltraFlex. It is a high quality, linear low density polyethylene (LLDPE) geomembrane with one or two coextruded, textured surfaces, and consisting of approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers; no other additives, fillers or extenders are used. The resin used is a specially formulated, proprietary virgin polyethylene and is designed specifically for flexible geomembrane applications. GSE UltraFlex Textured has excellent resistance to UV radiation and is suitable for exposed conditions. This product allows projects with greater slopes to be designed since frictional characteristics are enhanced. *These product specifications meet or exceed GRI GM17.*

### Product Specifications

| TESTED PROPERTY                                    | TEST METHOD   | FREQUENCY   | MINIMUM VALUE  |             |             |
|--|---|-------------|----------------|-------------|-------------|
| Product Code                                       |   |             | LUS040G000     | LUS060G000  | LUS080G000  |
| Thickness, (minimum average) mil (mm)              | ASTM D 5994   | every roll  | 38 (0.96)      | 57 (1.45)   | 76 (1.93)   |
| Lowest individual for 8 out of 10 values           |   |             | 36 (0.91)      | 54 (1.40)   | 72 (1.80)   |
| Lowest individual for any of the 10 values         |   |             | 34 (0.86)      | 51 (1.30)   | 68 (1.73)   |
| Density, g/cm <sup>3</sup>                         | ASTM D 1505   | 200,000 lb  | 0.92           | 0.92        | 0.92        |
| Tensile Properties (each direction) <sup>(1)</sup> | ASTM D 6693, Type IV<br>Dumbell, 2 ipm<br>G.L. = 2.0 in (51 mm) | 20,000 lb   |                |             |             |
| Strength at Break, lb/in-width (N/mm)              |   |             | 60 (11)        | 90 (16)     | 120 (21)    |
| Elongation at Break, %                             |   |             | 250            | 250         | 250         |
| Tear Resistance, lb (N)                            | ASTM D 1004   | 45,000 lb   | 22 (98)        | 33 (147)    | 44 (200)    |
| Puncture Resistance, lb (N)                        | ASTM D 4833   | 45,000 lb   | 44 (200)       | 66 (300)    | 88 (400)    |
| Carbon Black Content, %                            | ASTM D 1603*/4218   | 20,000 lb   | 2.0            | 2.0         | 2.0         |
| Carbon Black Dispersion                            | ASTM D 5596   | 45,000 lb   | +Note 1        | +Note 1     | +Note 1     |
| Asperity Height                                    | GRI GM 12   | second roll | +Note 2        | +Note 2     | +Note 2     |
| REFERENCE PROPERTY                                 | TEST METHOD   | FREQUENCY   | NOMINAL VALUE  |             |             |
| Oxidative Induction Time, min                      | ASTM D 3895, 200° C; O <sub>2</sub> , 1 atm                     | 200,000 lb  | >100           | >100        | >100        |
| Roll Length <sup>(2)</sup> (approximate), ft (m)   |   |             | 650 (198)      | 420 (128)   | 320 (98)    |
| Roll Width <sup>(2)</sup> , ft (m)                 |   |             | 22.5 (6.9)     | 22.5 (6.9)  | 22.5 (6.9)  |
| Roll Area, ft <sup>2</sup> (m <sup>2</sup> )       |   |             | 14,625 (1,359) | 9,450 (878) | 7,200 (669) |

#### NOTES:

- +Note 1: 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.
- +Note 2: 10 mil average. 8 of 10 readings ≥ 7 mils. Lowest individual ≥ 5 mils.
- GSE UltraFlex Textured is available in rolls weighing about 3,000 lb (1,360 kg).
- <sup>(1)</sup>The combination of stress concentrations due to coextrusion texture geometry and the small specimen size results in large variation of test results. Therefore, these tensile properties are average roll values.
- All GSE geomembranes have dimensional stability of ±2% when tested with ASTM D 1204 and ITB of <-77° C when tested with ASTM D 746.
- <sup>(2)</sup>Roll lengths and widths have a tolerance of ± 1%.
- \*Modified.

DS016s UflexTextSS R01/07/08

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 and specifications.

GSE and other trademarks in this document are registered trademarks of GSE Lining Technology, Inc. in the United States and certain foreign countries.

|                            |                                       |                                |              |               |                    |
|----------------------------|---------------------------------------|--------------------------------|--------------|---------------|--------------------|
| <b>North America</b>       | GSE Lining Technology, Inc.           | Houston, Texas                 | 800.435.2008 | 281.443.8564  | Fax: 281.230.6739  |
| <b>South America</b>       | GSE Lining Technology Chile S.A.      | Santiago, Chile                |              | 56.2.595.4200 | Fax: 56.2.595.4290 |
| <b>Asia Pacific</b>        | GSE Lining Technology Company Limited | Bangkok, Thailand              |              | 66.2.937.0091 | Fax: 66.2.937.0097 |
| <b>Europe &amp; Africa</b> | GSE Lining Technology GmbH            | Hamburg, Germany               |              | 49.40.767420  | Fax: 49.40.7674234 |
| <b>Middle East</b>         | GSE Lining Technology-Egypt           | The 6th of October City, Egypt |              | 20.2.828.8888 | Fax: 20.2.828.8889 |