

## Product Description

Geo Barrier™ EB25BS is a seven layer co-extruded geomembrane consisting of a very flexible, linear low-density polyethylene (LLDPE) and an inner core of chemically resistant EVOH, designed specifically as a barrier. High strength LLDPE provides exceptional tear and impact resistance. A robust stabilization package that exceeds the industry standard provides long-term protection from thermal oxidation and ultraviolet degradation in exposed applications. A lightly textured surface provides enhanced grip for ease of installation and worker safety.

## Product Use

Geo Barrier™ EB25BS is designed to stop gas vapor migration on Brownfield sites, in residential and commercial buildings as well as geomembrane containment and covering systems. When installed under concrete slabs as a gas barrier, a passive system is recommended to include a ventilated system with sump(s) that could be converted to an active control system with properly designed ventilation fans.

Geo Barrier™ EB25BS provides superior protection against deadly radon gas when installed as an under-slab gas barrier with a radon diffusion coefficient of  $7.0 \times 10^{-14} \text{m}^2/\text{s}$ . EB25BS is over 800 times less permeable to methane gas than LLDPE vapor barriers in a comparable thickness.

Geo Barrier™ EB25BS is an effective temporary and long term landfill cap with VOC diffusion coefficients ranging from 20 to 38 times less than standard 80 mil HDPE geomembranes. Contaminants found in leachate and landfill gas in municipal and hazardous waste landfills can migrate through standard HDPE contributing to both atmospheric and groundwater contaminations. EB25BS is an effective barrier to a wide range of VOCs including benzene, toluene, ethylbenzene, o-xylene and others.

## Size & Packaging

Geo Barrier™ is available in various increments up to 30,000 sq. ft. panels. All panels are accordion folded and tightly rolled onto a heavy-duty core for ease of handling and time saving installation.



Temporary Landfill Cover

## Product

## Part #

GEO BARRIER™ ..... EB25BS

## APPLICATIONS

- |                              |                           |
|------------------------------|---------------------------|
| EPS Geofoam Protection       | Underslab Methane Barrier |
| Landfill Cap                 | Underslab Vapor Barrier   |
| Temporary Landfill Gas Cover | Remediation Cover / Liner |
| Floating Gas Cover           | Leachate Collection Ponds |
| Underslab VOC Barrier        | Odor Barrier              |
| Underslab Radon Barrier      |                           |



## PRO-FORMA DATA SHEET - TYPICAL VALUES

PROPERTIES	TEST METHOD	Imperial	Metric
<b>WEIGHT</b>		122 lbs/msf	596 g/m <sup>2</sup>
<b>THICKNESS</b>	ASTM D5199	25.0 mils	0.64 mm
<b>DENSITY</b>	ASTM D792 or ASTM D1505	0.939 g/cm <sup>3</sup> Max.	
<b>*TENSILE STRENGTH</b> lbf/in. width (N/mm width)	ASTM D638/D6693 1. Tensile Strength at Break 2. % Elongation at Break	76 lbf/in. 575%	13.3 N/mm 575%
<b>*TEAR RESISTANCE</b>	ASTM D1004	17 lbf	76 N
<b>PUNCTURE RESISTANCE</b>	ASTM D4833	65 lbf	289 N
<b>CARBON BLACK %</b>	ASTM D1603 or D4218	> 2%	
<b>CARBON BLACK DISPERSION</b>	ASTM D5596	Pass <sup>2</sup>	
<b>OXIDATIVE INDUCTION TIME (OIT)</b>	ASTM D3895 Method A	> 100 min.	
<b>HIGH PRESSURE OIT (HPOIT)</b>	ASTM D5885	> 400 min.	
<b>OVEN AGING AT 85°C (HPOIT)</b>	ASTM D5721/D5885	82% retained	
<b>UV RESISTANCE (HPOIT)</b>	ASTM D5885	59% retained	
<b>LOW TEMP, IMPACT FAILURE TEMP</b>	ASTM D746	< -94° F	< -70° C
<b>RADON DIFFUSION COEFFICIENT</b>	K124/01/09	4.9 x 10 <sup>-14</sup> m <sup>2</sup> /s	
<b>BENZENE DIFFUSION COEFFICIENT</b>	See Note <sup>1</sup>	9.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
<b>TOLUENE DIFFUSION COEFFICIENT</b>	See Note <sup>1</sup>	8.5 x 10 <sup>-15</sup> m <sup>2</sup> /s	
<b>ETHYLBENZENE DIFFUSION COEFFICIENT</b>	See Note <sup>1</sup>	8.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
<b>M &amp; P-XYLENES DIFFUSION COEFFICIENT</b>	See Note <sup>1</sup>	8.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
<b>O-XYLENE DIFFUSION COEFFICIENT</b>	See Note <sup>1</sup>	7.5 x 10 <sup>-15</sup> m <sup>2</sup> /s	
<b>GASOLINE VAPOR TRANSMISSION</b>	ASTM D814	1.4 g/m <sup>2</sup> /day or 0.0159 mg/s/m <sup>2</sup>	
<b>METHANE PERMEANCE</b>	ASTM D1434	< 2.0 x 10 <sup>-15</sup> m <sup>2</sup> /s•atm 0.32 GTR (Gas Transmission Rate) ml/m <sup>2</sup> •D•ATM	
<b>PERMS</b>	ASTM E96 Method A 73° F, 50% RH	< 0.01 grains/(ft <sup>2</sup> •hr•in•Hg)	< 0.007 g/(24hr•m <sup>2</sup> •mm Hg)
<b>FACTORY SEAM REQUIREMENTS</b>			
<b>BONDED SEAM STRENGTH</b>	ASTM D6392 Mod.**	59 lbf/in.	103 N/cm
<b>SEAM PEEL ADHESION</b>	ASTM D6392 Mod.**	50 lbf/in.	87 N/cm

\* Tests are an average of MD and TD directions.

\*\* Seam testing at 12" per minute.

<sup>1</sup> Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, McWatters and Rowe, Journal of Geotechnical and Geoenvironmental Engineering© ASCE/September 2010.

<sup>2</sup> Carbon black dispersion (only near spherical agglomerates) for 10 different views: 9 in Categories 1 or 2 and 1 in Category 3

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. GEOCHEM, INC. MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.