

# ABSOLUTE BARRIER™

## EB25BS

High Performance Geomembrane with EVOH Gas Barrier & Enhanced Grip Surface

**RAVEN**  
INDUSTRIES

### Product Description

Absolute 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 against radon, methane and VOCs. 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

Absolute 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.

Absolute 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.

Absolute 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

Absolute 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 #

ABSOLUTE BARRIER™ ..... EB25BS

### APPLICATIONS

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



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## PRO-FORMA DATA SHEET

		ABSOLUTE BARRIER™ EB25BS	
PROPERTIES	TEST METHOD	Imperial	Metric
WEIGHT		122 lbs/msf	596 g/m <sup>2</sup>
THICKNESS	ASTM D5199	25.0 mils	0.64 mm
DENSITY	ASTM D792 or ASTM D1505	0.939 g/cm <sup>3</sup> Max.	
*TENSILE STRENGTH 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%
OXIDATIVE INDUCTION TIME (OIT)	ASTM D3895 Method A	230 min.	
HIGH PRESSURE OIT (HPOIT)	ASTM D5885	1713 min.	
PUNCTURE RESISTANCE	ASTM D4833	65 lbf	289 N
*TEAR RESISTANCE	ASTM D1004	17 lbf	76 N
UV RESISTANCE (HPOIT)	ASTM D5885	59% retained	
OVEN AGING AT 85°C (HPOIT)	ASTM D5721/D5885	82% retained	
LOW TEMP, IMPACT FAILURE TEMP	ASTM D746	< -94° F	< -70° C
RADON DIFFUSION COEFFICIENT	K124/01/09	7.0 x 10 <sup>-14</sup> m <sup>2</sup> /s	
BENZENE DIFFUSION COEFFICIENT	See Note **	9.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
TOLUENE DIFFUSION COEFFICIENT	See Note **	8.5 x 10 <sup>-15</sup> m <sup>2</sup> /s	
ETHYLBENZENE DIFFUSION COEFFICIENT	See Note **	8.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
M & P-XYLENES DIFFUSION COEFFICIENT	See Note **	8.0 x 10 <sup>-15</sup> m <sup>2</sup> /s	
O-XYLENE DIFFUSION COEFFICIENT	See Note **	7.5 x 10 <sup>-15</sup> m <sup>2</sup> /s	
METHANE PERMEANCE	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	
CARBON BLACK %	ASTM D1603 or D4218	2.5%	
PERMS	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)
FACTORY SEAM REQUIREMENTS			
BONDED SEAM STRENGTH	ASTM D4545 Mod.***	59 lbf/in.	103 N/cm
SEAM PEEL ADHESION	ASTM D4545 Mod.***	50 lbf/in.	87 N/cm

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

\*\* Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, McWatters and Rowe, Journal of Geotechnical and Geoenvironmental Engineering © ASCE/September 2010.

\*\*\* Raven Industries performs seam testing at 12" per minute.



PRO-FORMA SHEET CONTENTS: The data listed in the Pro-Forma data sheet is representative of initial production runs. These values may be revised at anytime without notice as additional test data becomes available.

Absolute Barrier™ EB25BS is a seven layer, co-extruded membrane consisting of a very flexible, linear low-density polyethylene (LLDPE) and an EVOH core layer to provide superior resistance to gas transmission. LLDPE provides high elongation, tremendous tear resistance and bursting strength. A minimum carbon black content of 2.0% provides excellent protection from UV rays and harsh weather conditions.

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. RAVEN INDUSTRIES 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.



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