

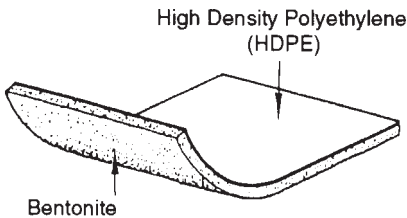
# TREMCO®

# Paraseal®

## HDPE/Bentonite Sheet Membrane Dual Waterproofing System

### Product Description:

Paraseal is a sheet waterproofing membrane manufactured to controlled thicknesses of 150 mils to 200 mils of tough, high density polyethylene (HDPE) and expandable, quality granular Bentonite.



The Bentonite, capable of expanding to 6 times its thickness, is laminated at a rate of up to one pound per square foot to the impermeable HDPE sheet forming a superior Dual Waterproofing System for application to horizontal and vertical surfaces.

### Basic Uses:

Paraseal is a waterproofing membrane designed for use on structures above and below grade. It is excellent for use on split slab parking, plaza decks, poured and block foundation walls and earth covered roofs. It has outstanding performance when used under conditions of high water head and installed prior to the concrete pour such as retaining walls, elevator pits, etc.

### Limitations:

If groundwater is brackish, SALTWATER Grade Paraseal may be required.

### Packaging:

4' x 24' (1.2m x 7.3m) standard rolls.

### Also available by SPECIAL ORDER:

- Larger size rolls may be customized for a nominal cutting charge.

### INSTALLATION

For complete details, refer to the appropriate Paraseal Installation Manual.

### Preparatory Work:

Examine all surfaces prior to starting application. Dust may be present; however all debris must be removed. Standing water and sharp protrusions over 1/4" (6.4mm) must be removed. Installation may proceed on uncured, damp or frozen surfaces. Paraseal is compatible with all currently used release agents.

### Vertical Walls:

Paraseal rolls are installed vertically or horizontally with HDPE side facing the installer, by nailing across top, lapping edges 1-1/2" (3.8cm) and nailing vertical seam every 2' (0.6m) with masonry nails.

Apply Temporary Tape to all seams. Pour 1-1/2" (3.8cm) cove of Paragranular at intersection of wall and footing prior to Paraseal installation. Compact fill to minimum 85% modified proctor.

### Under Floor Slab (minimum thickness 3" (7.6cm):

With bentonite side up, roll out Paraseal, overlap 3" (7.6cm) and install next roll. Staple together every 8" (20.3cm). Protect from rain and pour concrete as quickly as possible after installation.

With HDPE side up, roll out Paraseal, lapping seams minimum 3" (7.6cm) and tape all seams with Temporary Tape or other specified tape. Pour 1-1/2" coves of Paragranular around penetrations.



**Parking and Roof Decks:**

Remove debris, lap edges 3" (7.6cm) minimum in shingle fashion working from lower to higher elevation. Tape all seams.

**Lagging:**

Refer to Paraseal LG data sheet and Lagging Installation Manual.

**Protection:**

The Paraseal dual waterproofing system has a PUNCTURE RESISTANCE of 169 lbs. (76.6kg) and does not require an additional protection course for most applications. For special applications, contact your Tremco Representative for details.

**Storage:**

Protect from moisture. Store on skid or pallet, cover with polyethylene or tarp.

**Availability:**

Immediately available from distributors worldwide.

**Warranty:**

Tremco warrants its Paraseal Membranes to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, with respect to Paraseal Membranes, sole obligation shall be, at its option, to replace, or to refund the purchase price of the quantity of Paraseal Membrane proved to be defective and Tremco shall not be liable for any loss or damage including inci-

dental or consequential damages arising from the use of Paraseal Membranes.

**TYPICAL PHYSICAL PROPERTIES**

Physical Property	Value	Test Method
Color: Gray/Black		
Pliability: 180° bend over 1" (2.5cm) mandrel @ -25°F (-31.7°C)	10,000	ASTM D146
Tensile Strength: Membrane (psi)	4,000 psi (27.6MPa)	ASTM D412
Resistance to micro organisms (bacteria, fungi, mold, yeast)	Unaffected	
% Elongation-ultimate failure of membrane:	700%	D638 Type 4 Dumbell
Puncture Resistance	169 lbs. (76.6 kg)	ASTM E154-88
Resistance to hydrostatic head [FT. (m) of water]:	150 ft. (45.6m)	ASTM D751 Method Footnote #4
Resistance to water migration under membrane:	150 ft. (45.6m)/Head zero leakage	Footnote #1
Water migration at or through joint	Instant seal/no penetration	Footnote #5
Permeance	0.031 Grains/hr*ft*in.Hg.	ASTM E96-92
Cycling over 1-1/2" 38.1mm joint	No deterioration/2000 cyc.	Footnote #2
Cycling over 1/4" (6.4mm) crack	No deterioration/250 cyc.	Footnote #3
Installation Temperatures	-25°F to 130°F (-31.7°C to 54.4°C)	
Non-toxic:	Do not ingest	
Freeze/thaw cycles:	No effect before or after installation.	

Non-staining:  
Resistance to chemicals & gases: Extremely high resistance - contact manufacturer for specific information.  
Life Expectancy: both high density polyethylene and bentonite have life expectancy measurable in thousands-of-years.

**FOOTNOTES FOR TECHNICAL DATA:**

1. A 1" (2.5cm) diameter hole was cut in the middle of a 3-1/2" (8.9cm) diameter sample of Paraseal. Sample clamped in 3" (7.6cm) diameter permeameter, 150' (45.6m) water head applied.
2. Membrane placed between 2 clamps 1-1/2" (3.8cm) apart. Temperature reduced to -25°F (-31.7°C) and clamps are pulled apart to 2-1/2" (6.4cm). Cycle repeated between 1-1/2" (3.8cm) and 2-1/2" (6.4cm) - 2000 times.
3. Membrane placed between butting clamps. Clamps spread 3/8" (1cm) at -25°F (-31.7°C). Cycle repeated 250 times.
4. Membrane applied to porous stone and placed in permeameter. Pressure increased to equivalent of 150' (45.6m) water head.
5. Test same as #4 only performed at joint.

\*Above based on 20 mil HDPE/Bentonite System

For MSDS and Spec Data Sheets, visit our website: [www.tremcosealants.com](http://www.tremcosealants.com)



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