City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Below is a typical **inverted** cold laminated assembly (layup) of the **Pro-Seal® FlexSystem II Methane Barrier**, **Waterproofing**, and **Water Management System**™.

Inverted layup of the Pro-Seal FlexSystem II Methane Barrier Waterproofing and Water Management System Tera Firma ###### ##### ##### Shoring Wal ##### ##### ##### ##### Geo textile (pre attached) ##### ##### Pro-Seal Pro-Drain Mat (cold laminating component) ##### ##### ##### PE plastic (pre attached) (cold laminating component) ##### ##### ##### Pro-Seal FlexSystem ##### (spray applied ##### cold laminating membrane) ##### Pro-Seal AL Board ##### (cold laminating component ##### ##### ##### Termination Bar ##### Pro-Seal 34 ##### Anchors

This is a (not to scale) schematic of the Pro-Seal FlexSystem II Methane Barrier System as laid up in the inverted format to accommodate the installation of concrete pour, Shotcrete or Gunite (the latter two only with manufactures

approval of site). Take specialnote that the Pro-Seal 34 caulking by Pro-Seal®

Products is used per the manufactures instructions to create self-sealing & healing of through holes. To achieve this characteristic the manufactures instruction must be followed carefully.

Contact the Pro-Seal Products technical department Toll Free at 800 349 7325 or Email at information@prosealproducts.com.

Note: Example only 15 year limited warranty layup inverted application.

The layup (above) is used under special conditions where access space might difficult or impossible to achieve after a concrete pour due to location and/or

positioning of a neighboring or abutted structure.



The photo above is an example of an inverted installation of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing, and Water Management System™** that will have concrete poured or shot to it.

### **System Component**

**Pro-Seal Pro-Drain®** is a multi-layered geocomposite that combines a high compressive strength core with a geo-textile thermo-fused to the core. This highly durable and porous product is designed to help water and fine soil particles flow through the air-gap to the drainage field.

The Pro-Seal Pro-Drain® is an integral part of the Pro-Seal® Products Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management™ combined integrated system.

- Available in 6 ft. or 8 ft. widths
- Easy to install
- High flow capacity
- Low labor cost
- Drains maximum gas vapor and water away from structure



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# **Applications:**

- Verticals:
  - o Below Grade
- Horizontals:
  - Below Grade
  - Under Floor
  - Between Split Slab

Use anywhere dangerous gas vapors such as Methane and Radon and/or ground water are problematic to your structure

### **Technical**

Information	Value
Material	1 Part Roll
Mix time	N/A
Appearance	Roll
Color	Brown
Packaging:	Widths; 6 ft. roll or 8 ft. roll

### Available with or without:

- Geo-textile screen
- PE plastic pre attached sheet

# **Application Layup Options (verticals)**

### Pro-Seal Pro-Drain® Inverted Layup

The **Pro-Seal Pro-Drain**® may be applied to and anchored to the vertical shoring wall. When the cold lamination layup of the system is completed, generally as seen in the drawing (above), ahead of the concrete pour the concrete is then poured to the completed **Pro-Seal**® barrier system. All anchor, through holes and overlapping **Pro-Drain**® snap joints and overlapping PE plastic must be sealed with **Pro-Seal 34**® caulking as tested with the system and per the manufactures requirements.

# **Specifications**

(Values of Pro-Drain® when not in system)

Test	Data	Value	
Core			
ASTM D	Weight	2.45 oz./ft²	
3776	0		
ASTM D	Compressive	11,000 psi	
1621	strength	550 kn / m <sup>2</sup>	
Filter fabric	T		
ASTM D 4632	Grab tensile	130 lbs.	
ASTM D	Elongation	60%	
4632			
ASTM D 4533	Trapezoidal tear	60 lbs.	
ASTM D	Dunatura atranath	40 lbs.	
4833	Puncture strength	40 lbs.	
ASTM D 3786	Mullen burst	140 psi	
ASTM D	Apparent	70 sleeve size	
4751	operating		
ASTM D		55 ava va /#2	
4491	Flow rate	55 gpm / ft <sup>2</sup>	
ASTM D	Typical weight	3.9 oz. / yd.	
5261	Typical weight	sq.	
ASTM D	Thickness	18 mils	
5199	THICKHESS	10 111118	
ASTM D	U.V. resistance	70% @ 500	
4355	U.V. TESISTATICE	hrs.	
Composite system			
ASTM D	Water flow rate	5.1 gal/min/ft	
4716	vvaler now rate	5.1 gal/min/ft.	

# **Primary Substrate below grade vertical** (positive side)

# Pro-Seal Pro-Drain® Standard Vertical Layup

The **Pro-Seal Pro-Drain**® may be applied over the lamination as directly applied to the primary substrate as seen in the positive side layup in the guide drawing (below), prior to back fill. All anchor, through holes and overlapping Pro-Drain® snap joints and overlapping PE plastic must be sealed with **Pro-Seal 34**® caulking and per the manufactures requirements.



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**System Component** 

\* Data based on laboratory-tested materials.

### **System Component**

Pro-Seal A.L. Board™ is a semi-rigid fiberglass reinforced rubberized polycarbon core sandwiched between two layers of waterproof protection sheet that chemically adheres with the Pro-Seal® Cold Liquid laminate binding the Pro-Drain® and the Pro-Seal AL Board™, together in a water and gas vapor tight barrier to form the Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™. \*Combatable with polycarbon/polycarbonate integrated technology.

- Rugged and durable
- Easy to install
- Available in two finishes, Sanded or Smooth
- May be adhered to Pro-Seal polycarbon/ polycarbonate liquid membranes
- Light weight
- Available in 1/8" thickness

Applications as part of the Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System:

- Between-Slab
- Below-Grade
- Under Slab
- Verticals
- Horizontals
- Slopes
- Positive Side
- Negative Side

#### Where to use System:

- Parking Decks
- Roofs
- Reservoirs
- Exterior Walls
- Utilities
- Commercial
- Residential
- Industrial
- Marine

**Application Instructions:** For specific application instructions or guide specifications, contact our



Technical Department at 800.349.7325 or technical@prosealproducts.com

#### **Technical**

Information	Value
Material	1 Sheet
Appearance	Solid Sheet
Sheet Size	~ 39 ½" X 80"/ 2m²
Application Temperature	33°F – 220°F
Application Humidity	<90%
Solids	100% Weight
Weight	15 Lbs. /Sheet
Storage Indoors	<220°F

#### **Chemical Resistance (in system only)**

ASTM D 2299		
Cured Material	Rating	
Alkalis Spillage	Good	
Alkalis Splash	Good	
Solvents Fumes	Good	
Solvents Spillage	Good	
Solvents Splash	Good	
Salt Fumes	Good	
Salt Spillage (72 Hour Clean Up)	Good	
Water Spillage	Excellent	
Water Splash	Excellent	
Water Constant Immersion	Excellent	

Note: results based on contact side of the applied system having the direct contact exposure.

#### Specifications (results when not in system)

### **System Component**

**Pro-Seal 34**<sup>®</sup> is a single component M34 elastoplastic, sealant material. **Pro-Seal 34**<sup>®</sup> stops leaks and seals on contact even through water and oil! **Pro-Seal 34**<sup>®</sup> is gunnable from 38°F to 98°F and may be applied to surface temperatures ranging from -70°F/ -56.6°C to +220°F / 104°C. Pro-Seal 34 is a Nano Polycarbon/polycarbonate integrated technology.

16541 Redmond Way • Suite 363C • Redmond, WA 98052 Phone: 800.349.7325 • information@prosealproducts.com www.prosealproducts.com • © Copyright Pro-Seal

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Pro-Seal 34<sup>®</sup> is an integral part of the Pro-Seal<sup>®</sup> FlexSystem II Methane Barrier, Waterproofing and Water Management System™ as tested.

- Seals through rain & moving water
- Seals through cutting oils, lubricants and other contaminant liquids
- Never gets hard or brittle, stays pliable
- 1200% elongation
- 350% stretch across elongation
- Applies through a wide range of heat, cold and humidity
- 2 year shelf life
- 6 month open tube life
- Paintable upon application
- NSF certified when use in a Pro-Seal<sup>®</sup> Positive or Negative Side Repair Systems™

Application as part of the **Pro-Seal**<sup>®</sup> **FlexSystem II Methane Barrier, Waterproofing and Water Management System**™:

Typically, in a primary surface application of the **Pro-Seal® System:** 

- Apply 2 ea. ¼ in beads along the snap joints of the Pro-Seal Pro-Drain<sup>®</sup>.
- Apply 2 ea. ¼ in beads along the overlaps of the PE on the back of the Pro-Seal Pro-Drain<sup>®</sup>.

Typically, in an inverted application the **Pro-Seal® System**:

- Apply 2 ea. ¼ in beads along the snap joints of the Pro-Seal Pro-Drain<sup>®</sup>.
- Apply 2 ea. ¼ in beads along the overlaps of the PE on the back of the Pro-Seal Pro-Drain<sup>®</sup>.

Applications: Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™ applies to Galvanized metal, Plaster, Wood, Aluminum, Stone, Concrete, and Vinyl, Boats, Recreational Vehicles and more. \*Not intended for hot tubs or showers or high touch exposed surfaces.

#### **Technical**

Information	Value
Material	1 part
Mix time	N/A
Appearance	Caulking/sealant
Cure time	40 mils/day
Full cure	72 hours
Specific gravity	1.096
Elongation	1200%
Stretch	350% across
Shrinkage	15%
Viscosity	1.0 paste
Colors:	Clear, black, brown, white, gray
Packaging:	10.2 oz. Tube or 1, 5 and 55 gallon

### Specifications (not as component of system)

ASTM C 920; Type S, Class 25			
Test	Data	Value	
ASTM C 661	Cured hardness	≥15 shore A	
ASTM C 603	Extrusion rate	15 seconds	
ASTM C 679	Tack free time	72 hrs	
ASTM C 510	Stain /color Change	None	
ASTM C 719	Adhesion & Cohesion	Adhesion ≥ Cohesion	
ASTM C 794	Adhesion loss in peel	None	
ASTM C 793	Accelerated U.V. exposure	Opaque @ 2,800 A.U.	

<sup>\*</sup> Data based on laboratory-tested materials.

FED SPEC TT-S-00230 C FED SPEC TT-S-001543A	(not as system co	mponent)
Test	Data	Value
ASTM C 920	Vertical &	Passes
FED SPEC TT-S-00230 C	Horizontal slump	rasses
FED SPEC TT-S-001543A	Discolor change	None

<sup>\*</sup> Data based on laboratory-tested materials.

**Pro-Seal 34® Caulking** is a critical and integral component of the **Pro-Seal® FlexSystem II Methane** 



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Barrier, Waterproofing and Water Management System™ due to its unique characteristics and abilities.

**Pro-Seal 34**® caulking is a unique highly adhesive, high bonding, gun grade material. The material adheres to all known surfaces through a wide variety of fluids and viscous materials. The material will stick to the first solid it comes in contact with. If you are having any adhesion issue contact our technical department. As an example; there is a common issue is with metal roofs during pollination cycles. A micro layer of pollen may form on any flat surface. The **Pro-Seal 34**® caulking will appear to not be adhering. If you wipe the surface with white vinegar and water the pollen will be removed, and adhesion will occur. This is particularly common in northern climates such as Alaska.

The primary bond breaker for this material is liquid soap or soap. To clean tools and equipment use solvents. Do not place or apply solvents or clean tools anywhere near product application areas or product sites. The coverage rates are noted in the table below.

#### Coverage

Joint size	Linear Feet / Tube
1/8"x1/8"	106.4
1/8" x 1/4"	53.2
1/8" x 3/8"	35.4
1/8" x 1/2"	26.6
1/8" x 5/8"	21.3
1/8" x 3/4"	17.7
1/8/ x 7/8"	15.2
1/8" x 1"	13.3
1/4" x 1/4"	26.6
3/8" x 3/4"	6.0
3/8" x 7/8"	5.1
3/8" x 1"	4.4
1/2" x 1/2"	6.7
1/2" x 5/8"	5.4
1/2" x 3/4"	4.4

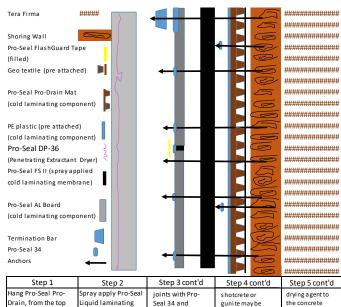
# **Limited Warranty Program**

Warranties are only offer when **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** is installed by a factory authorized applicator in good standing with the manufacturer Pro-Seal Products®. The length of warranty is based on individual projects, system design layup and installation conditions at site. Warranties are fee based and are available 13, 15-, 20-, 25- and 35-year periods depending on project

and site qualifications. The product may be installed by non-authorized applicators where no warranty shall be offered or enforce.

All repairs of warrantied projects must be completed by **Pro-Seal**® **Authorized Applicators**.

# Pro-Seal<sup>®</sup> FlexSystem II Methane Barrier, Waterproofing and Water Management System<sup>™</sup> Inverted Layup Application Step by Step



Step 1	Step 2	Step 3 cont a	Step 4 cont a	Step 5 cont a
Hang Pro-Seal Pro- Drain, from the top down, to the shoring wall. Anchor with mechanical fastener applied through Pro- Seal 34 caulking to assure self sealing. Seal over lapping snap joints with Pro- Seal 34. Seal overlapping PE sheet with Pro-Seal 34.	Spray apply Pro-Seal Liquid laminating membrane Pro-Seal FSII to the (after overlaps sealed) Pre- attached PE sheet. Step 3 Press Pro-Seal AL Board into the wet membrane and mechanically attach. Run	joints with Pro- Seal 34 and Pro-Seal FlashGuard Tape. Fill tape with Pro- Seal AquaFlex. Attach top of assembly with termination bar running anchors through Pro-Seal 34 caulking to assure they are	shotcrete or gunite may be pumped to pre-applied inverted system. Contact the manufacturer if you are considering one of the above two special methods.	drying a gent to the concrete substrate once forms are pilled. Note: This guide is general ans always look to the plans ans specifications for sites pecific design and appl kcation
Mechanically Anchor	anchors through	self sealing.	Step 5	layup.contact
as required, running	Pro-Seal 34 caulk	Step 4	Sprayapply Pro-	Pro-Seal Tech. Dept. for more
anchors through Pro- Seal 34 to assure self sealing anchors.	to create a self sealing anchor.	Pour Concrete to forms , under special conditions	Seal DP 36 deep penetratingfluid	information.

#### **Contractor Training and Authorization**

To become an authorized applicator of Pro-Seal® Products Systems and materials attend Pro-Seal University™. Learn about and many unique Nano tech materials that may be applied in adverse environments and save time and labor. For more information contact Pro-Seal® Products Technical Department.



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**Pro-Seal Technical Support:** Contact our technical department at 800.349.7325, <a href="mailto:technical@prosealproducts.com">technical@prosealproducts.com</a> or <a href="mailto:information@prosealproducts.com">information@prosealproducts.com</a> or visit our website <a href="https://www.prosealproducts.com">www.prosealproducts.com</a> for additional information

**Distributor and Dealer** enquires are welcome. We manufacture over 250 unique products and systems for the Industrial, Marine. Commercial Construction, Military, Utility, Municipal, DOT, Petroleum, Chemical and other markets.

#### **Disclaimer's and Cautions**

#### **Drawings, Design and Guide Instructions**

#### **Drawings:**

The drawings contained herein these pages are (not to scale). The drawings are not precision nor are they to be construed as actual as applied drawings. These drawings are likenesses meant to convey the concept, idea and methods of potential use and application of the Pro-Seal® FlexSystem II Methane Barrier System™.

#### Design:

Actual design layup and applied methodology if the installation of the system will be done by the specifying party with the review of the manufacturer's technical department and final manufacturer's approval of final design when a warranty is required.

#### Instructions:

The guide instructions contained herein are not project or site specific. Said information is strictly a guide to convey design concept, layup concept and use concept.

#### Cautions:

Keep out of reach of children. May cause skin or eye irritation. This product may be harmful if swallowed. Do not induce vomiting. Use in well ventilated areas. Contact a physician immediately and always seek a physician's advice regarding first aid. Use only in commercial or industrial applications. Use only on intended surfaces. Contact manufacturer for specific application uses. See material safety data sheet for additional cautions

#### **Limited Warranty:**

We warrant our product to be free of defects in material and workmanship; and to be in accordance with our company quality control standards. All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee, or

warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for the user's own purpose before adoption.

Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations. Liability under any condition shall be limited to replacement of material only. No statement claim verbal, written, paper medium, electronic medium or any other known or unknown medium made by independent representation, dealers, distributors or any third parties whatsoever that are not in written form, nor authored and/or distributed by from the manufacturer, shall not be the responsibility nor liability of the manufacturer.

#### Communication with Pro-Seal® Products Is Easy!

- We love our clients!
- We love customer service!

Sales and Marketing: Ph.: 800 349 7325

Email: information@prosealproducts.com

Place Orders Electronically: <a href="mailto:accounting@prosealproducts.com">accounting@prosealproducts.com</a>

Limited availability of product line; Amazon.Com

amazon.com: Pro-Seal 34®

amazon.com: Pro-Seal Extreme Dry™

Place orders by mail:

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