



## TripleSeal Waterproofing Membrane

### Product Description

TripleSeal is the ultimate multi-layered waterproofing system that has bentonite clay on both sides of virgin HDPE membrane and a thin scrim of polypropylene to protect the bentonite from exposure to the elements. This system will form waterproof barriers to both sides of the HDPE. It combines the swelling properties of bentonite clay with the strength and protection of virgin HDPE sheets to form two layers of self-sealing waterproofing, for the toughest projects even under hydrostatic conditions. Because both bentonite and the HDPE membrane are very stable, TripleSeal waterproofing will provide long-lasting protection for your building

### Basic Uses

TripleSeal waterproofing membrane is used on structures below grade and is especially effective where the waterproofing is applied before the walls or floor are poured such as blindside installation lagging, under floors, and elevator pits. TripleSeal is also effective in combination with Extruded Styrofoam Insulation in preventing water migration behind the insulation. It has outstanding performance when used under conditions of high water head.

### Installation

For complete installation guidelines, please contact TegraSeal Products, ask your sales Representative, or go to our website for details.

### Preparatory Work

TripleSeal requires firm background to maintain 24 lbs per sf compression. Fill voids or spaces more than 1" with grout and/or plywood. Remove nails and sharp protrusions over  $\frac{1}{4}$ " (6.4 mm). Installation may proceed on green concrete with damp or frozen surfaces in all weather conditions, but standing water must be removed. Cover lagging boards and soldier piles with drainage layer or HDPE. Complete installation at penetrations (utility and/or tiebacks) as describe by the manufacturer.

### Lagging

TripleSeal rolls are installed, either vertically or horizontally, by nailing across the top every 20" (0.51 m), lapping seams at least 4" (10.2 cm). Overlap seams as shingles. Close the seams with nails at 2' (0.6 m) o.c. and box staple between.

### Under Slab

TripleSeal waterproofing system will provide a waterproof seal and a vapor barrier. Roll out membrane over HDPE or mud slab. Overlap and stagger seams at least 4" (7.6

cm). Fasten with staples or nails. Tie in the floor to other waterproof surfaces as described by the manufacturer. Protect area from flooding prior to concrete pour.

### Elevator Pits

Down deep where water is most likely to be present at the bottom of your project in an elevator pit, TripleSeal will form two waterproofing seals substrates because it has bentonite on both sides of the HDPE membrane. Cover the forms and the floor with 6 or 20-mil HDPE, and then install TripleSeal waterproofing membrane. Over lap the seams 6" or increase to 20" for the ultimate in performance.

### Protection

The TripleSeal waterproofing system does not require an additional protection course for most applications. For special applications, contact your TegraSeal Representative for details.

### Packaging

3.5' x 14.3' (1.1 m x 4.4 m) or 50 sf (4.6 m<sup>2</sup>) standard rolls. Customized lengths are available by SPECIAL ORDER.

### Storage

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

### Availability

Available nationwide through TegraSeal distributors. Contact TegraSeal at 888-815-1816 or at [www.tegraseal.com](http://www.tegraseal.com) for details.

### Limitations

TripleSeal installation must be confined by a minimum of 24 lbs per sf. Keep TripleSeal dry, protect from exposure to the elements. TripleSeal is resistant to many common contaminants in soil. Please contact TegraSeal for compatibility testing.

### Warranty

TegraSeal Products, LLC (TegraSeal) warrants its products will be delivered free of defects in materials and workmanship. TegraSeal will replace the material or refund the purchase price. TegraSeal makes no other warranty, including an implied warranty of merchantability or fitness for a particular purpose. TegraSeal shall not be liable for any other loss or damage. Contact TegraSeal to discuss specific details for extended warranty periods.



## TripleSeal Waterproofing Membrane

### TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Value
TripleSeal Waterproofing Membrane		Fabric/Gray/Green/Gray/Fabric
High-Density Polyethylene (HDPE)		Green 20-mil virgin resin HDPE
Bentonite (2 layers)		Sodium Montmorillonite
Weight		1.5 lb per sq foot (7.34 kg/m <sup>2</sup> )
Puncture Resistance	ASTM E154-88	172 lbs. (77.5 kg)
Tensile Strength: Membrane	ASTM D638	MD: 3750 psi (25.9 MPa) TD: 3780 psi (26.1 MPa)
% Elongation at break	D638 Type 4 Dumbbell	567%
Crack Bridging		<sup>3</sup> / <sub>8</sub> " (0.95 cm) crack
Resistance to hydrostatic head	ASTM D751 Procedure A	169 ft. (51.5 m) of water
Water Vapor Permeability:	ASTM E96-80	0.39 x 10 <sup>-13</sup> cm/sec 0.61 ng/ m <sup>2</sup> .s.Pa 0.024 Perms (grains/ft <sup>2</sup> * hr * inHg)
Resistance to micro organisms: (bacteria, fungi, mold, yeast)	ASTM E154-88 Section 13	Unaffected
Toxicity:		Low. Do not ingest.
Staining:		No known incompatibilities
Chemical Resistance:		Extremely high resistance to chemicals & gases. Contact manufacturer for specific information.
Freeze/thaw cycles:		No effect before or after installation.
Installation Temperatures	ASTM D746, ASTM D1238	-40°F to 150°F (-40°C to 65.5°C)
Life Expectancy:		Both HDPE and bentonite have life expectancy measurable in hundreds-of-years.