



## Exterior Below-Grade Commercial Bentonite Waterproofing System

# ArmorClay 1500

### Description

ArmorClay 1500 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, ArmorClay 1500 waterproofing will provide long-lasting protection for your building.

### Uses

ArmorClay 1500 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. ArmorClay 1500 is also effective in combination with *Mar-flex Neoflam* Insulation in preventing water migration behind the insulation. It has outstanding performance when used under conditions of high water head pressure. Can be used as a complete system with many Mar-flex Commercial Drainage Boards and Mats as well.

### Installation

For complete installation guidelines, please ask your Sales Representative, call Mar-flex at 800-498-1411 or visit our website at [www.mar-flex.com](http://www.mar-flex.com) for details.

### Required Prep Work

ArmorClay 1500 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 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

ArmorClay 1500 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 ArmorClay Mastic Adhesive and nails at 2' (0.6 m) o.c. and box staple between.

### Under Slab

ArmorClay 1500 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, ArmorClay 1500 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 ArmorClay 1500 waterproofing membrane. Overlap the seams 6" or increase to 20" for the ultimate in performance.

### Protection

The ArmorClay 1500 waterproofing system does not require an additional protection course for most applications. For special applications, contact your Mar-flex 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. Each or 20 rolls per pallet maximum.

### Storage

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

### Availability

Available nationwide through Mar-flex distributors. Contact us for details.

### Limitations

ArmorClay 1500 installation must be confined by a minimum of 24 lbs per sf. Keep ArmorClay 1500 dry, protect from exposure to the elements. ArmorClay 1500 is resistant to many common contaminants in soil. Please contact Mar-flex for compatibility testing.

### Limited Warranty

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



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**HEALTH AND SAFETY INFORMATION IS GIVEN IN THE SAFETY DATA SHEET (SDS) AND THE PRODUCT DATA SHEET AVAILABLE FOR THIS PRODUCT. THESE SHOULD BE READ AND UNDERSTOOD BEFORE USING THIS PRODUCT.**

ArmorClay 1500 Typical Physical Properties		
Property	Method	Results
Thickness	--	.26"
Membrane		Fabric/Gray/Green/Gray/Fabric
Membrane High-Density Polyethylene		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> ) 172
Puncture Resistance	ASTM-E-154-88	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	ASTM D638 Type 1 dogbone	567%
Crack Bridging		3/8" (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 stability		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 measureable in hundreds-of-years.