

# ENVIROSHEET<sup>®</sup>

SHEET MEMBRANE WATERPROOFING SYSTEM



**CETCO**  
COLLOID ENVIRONMENTAL TECHNOLOGIES COMPANY

Building Materials Group

# ENVIROSHEET®

## Self-Adhering Membrane Waterproofing System

**E**NVIROSHEET® is a rubberized-asphalt sheet membrane system designed to waterproof vertical and horizontal structural concrete, masonry and wood substrates. EnviroSheet's quality construction and adhesion to the substrate provides long term performance and ensures uniform, consistent waterproofing protection. EnviroSheet is excellent for waterproofing below grade foundation walls, plaza decks, parking decks, tunnels, interior slabs and earth covered structures.

Installation of EnviroSheet is fast and easy. Simply position the product into place over a properly prepared and primed substrate. EnviroSheet easily contours to substrate transitions and can be cut on site to form around penetrations. The result is always a reliable uniform waterproofing system.

## COMPOSITION AND MATERIALS

EnviroSheet is a composite membrane consisting of specially formulated rubberized asphalt integrally bonded to a cross laminated polyethylene liner produced at a minimum 60 mil (1.5 mm) thickness. The membrane is supplied in rolls 36" (91.4 cm) wide by 66.7' (20.3 m) long; 200 square feet (18.6 sq m) per roll.

EnviroSheet is designed for applications where ambient and surface temperatures are 50°F (10°C) and above. The membrane is also available in a low temperature formulation — EnviroSheet LT — designed for applications when temperatures are between 60°F to 25°F (16°C to -4°C). Installation is not recommended when the temperature is 25°F (-4°C) or lower.

Enviroprimer SB and Enviroprimer WB (water based) are used to condition all surfaces where EnviroSheet membranes will be applied. The primers prepare the substrate for the EnviroSheet membrane and provide excellent long-term adhesion.

EnviroMastic trowel-grade, cold applied elastomeric mastic is used in conjunction with EnviroSheet membranes for detailing drains, surface transitions, penetrations, terminations, and other specified details.

EnviroSheet should be protected with Aquadrain, Protection Mat 10V or other approved protection board immediately following installation.

## ADVANTAGES OF ENVIROSHEET WATERPROOFING

- Fully-Adhered Membrane
  - Factory Controlled Thickness
  - High Hydrostatic Resistance
  - High Chemical Resistance
  - Cold Applied
  - Easy To Apply
  - Excellent Elongation
  - Two-Component Membrane
  - Substrate Compatibility
  - Flexibility
- Eliminates water migration between membrane and substrate
  - Insures consistent application rate
  - Tested to over 150 feet of hydrostatic head pressure
  - Resists attack from many chemicals
  - Eliminates need for heating equipment and danger from hot materials
  - Minimize application errors
  - Resilient to structural movement, bridging small cracks and joints
  - Combines high strength and chemical resistance of HDPE with superior adhesion and self-sealing properties of modified asphalt
  - Can be applied to structural concrete, masonry and wood surfaces
  - Membrane easily conforms surface transitions and corners

## APPLICATIONS

- FOUNDATION WALLS
- INTERIOR SLABS
- PLAZA DECKS
- BRIDGE DECKS
- PARKING DECKS
- PLANTERS
- TUNNELS
- BALCONIES
- EARTH COVERED STRUCTURES

## APPLICATION INSTRUCTIONS

Envirosheet membrane should be applied during dry weather conditions at temperatures above 50°F (10°C) - use Enviroshield LT Membrane when the temperature is 60°F to 25°F (16°C to -4°C). The substrate must be clean, dry and free of surface irregularities. Concrete should be cured a minimum of seven days prior to installation. Lightweight structural concrete should be cured a minimum 14 days.

Prime all surfaces and allow primer to dry for a minimum 30 minutes to a tacky finish. Areas primed and not covered with membrane within 24 hours should be re-primed.

Prepare all drains, penetrations, and surface transitions with proper accessory detailing products.

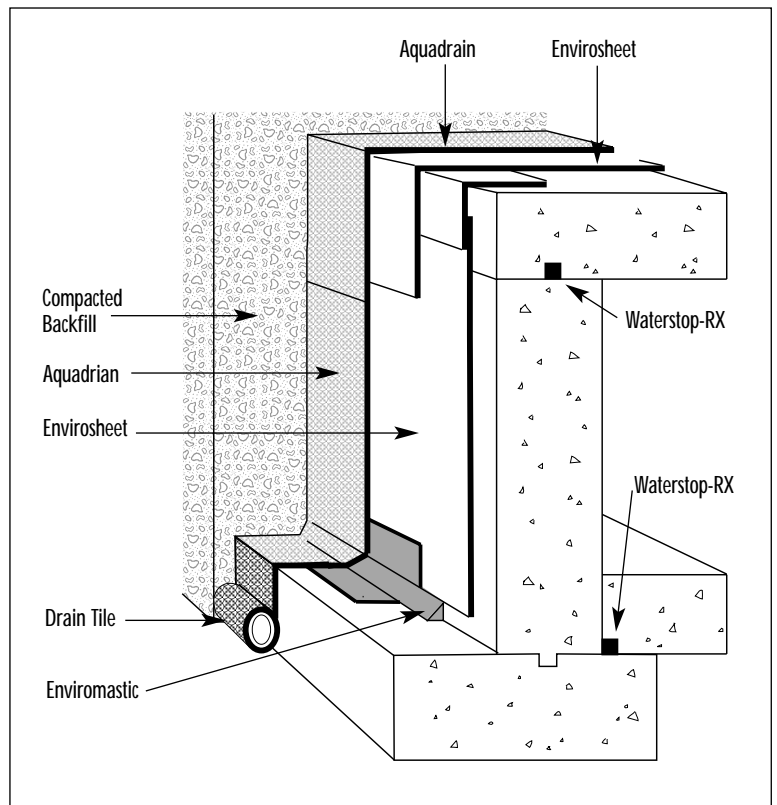
Start membrane application by removing the release paper. Apply the membrane, beginning at the low point (around drains) and install toward the high point. Lap membrane side edges and ends a minimum 2-1/2" (65 mm). Roll membrane immediately after placement to ensure full adhesion. Install a 12" (300 mm) wide membrane strip in all inside and outside corners before applying full sheet. All membrane terminations should receive a trowel of Enviromastic.

A protection course should be applied at the end of each day's work to prevent damage caused by other trades, construction materials or backfill.

To ensure maximum waterproofing protection, use Aquadrain® prefabricated drainage composite in conjunction with Enviroshield waterproofing.



Below-grade Concrete Wall Installation



Typical Enviroshield Waterproofing Detail



Split-slab Plaza Deck Installation

## ENVIROSHEET® MEMBRANE PHYSICAL PROPERTIES

<i>Property</i>	<i>Test Method</i>	<i>Typical Value (metric)</i>
Color		Dark Gray-Black
Thickness		60 Mils (1.5 mm)
Hydrostatic Head Resistance	ASTM D 5385	231 ft. (70 m)
Tensile Strength, Membrane	ASTM D 412 (C) Mod.	300 psi (2,068 kPa)
Tensile Strength, Film	ASTM D 412	5,000 psi (34,475 kPa)
Elongation	ASTM D 412 (C) Mod.	300% min.
Permeance	ASTM E 96 (B)	0.05 perms
Low Temperature Flexibility	ASTM D 1970	Unaffected at -20°F (-29°C)
Crack Cycling (100 Cycles)	ASTM C 836	Unaffected at -25°F (-32°C)
Peel Strength	ASTM D 903	10 lbs./in. width (1.8 kN/m)
Lap Adhesion	ASTM D 1876 Mod.	7.0 lbs./in. width (1.2 kN/m)
Puncture Resistance, Membrane	ASTM E 154	61 lbs. (0.275 kN)
Water Absorption, 72 Hours	ASTM D 570	0.09%
Exposure to Fungi	GSA-PBS-07115	Unaffected

## CODES, CERTIFICATIONS, STANDARDS

- Federal Construction Guide Specification  
FCGS 07111
- General Services Administration  
PBS 07115
- Veteran's Administration  
H-08-1 Section 07113
- Department of the Navy  
NFGS-07111
- Corps of Engineers  
CEGS 07111-3-82
- International Conference of Building Officials  
Section 1813.0
- American Railway Engineering Association

### WARRANTY

The information contained herein supersedes all previous versions printed prior to February 2002 and is believed to be accurate and reliable. CETCO makes no warranty of any kind and accepts no responsibility for the results obtained through application of this information. CETCO reserves the right to update information without notice.

CETCO warrants its Envirosheet products to be free of defects in material and workmanship when delivered to CETCO's customers. CETCO further warrants that its products conform to the specifications published in CETCO's current sales literature. If a Envirosheet product is defective or does not meet published specifications and our customer gives notice to CETCO before installing the product, CETCO will replace the product without charge to our customer or refund the purchase price at CETCO's election. Replacing the product or obtaining a refund are the buyer's sole remedy for a breach, and CETCO will not be liable for any consequential damage attributed to a defective product. This warranty is exclusive and in place of all other warranties expressed or implied and CETCO makes no other warranty as to its products.



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