



Approval # 20010029
(replaces 980069-U)

Environmental & Regulatory Services Division
Bureau of Petroleum Products and Tanks
201 West Washington Avenue
P.O. Box 7837
Madison, WI 53707-7837

Wisconsin COMM 10 Material Approval

Equipment: GeoFlex-S, GeoFlex-D and GeoVent
Nonmetallic Underground Piping

Manufacturer: Environ Products, Inc.
P.O. Box 330
Smithfield, NC 27577-0330

Expiration of Approval: December 31, 2007

SCOPE OF EVALUATION

GeoFlex-S nonmetallic underground carrier piping, GeoFlex-D nonmetallic underground carrier piping and secondary containment, and GeoVent flexible vent pipe, manufactured by Environ Products, Inc., were evaluated for use as piping for underground storage tank systems in accordance with **s. Comm 10.51 (2)** of the current edition of the Wisconsin Administrative Flammable and Combustible Liquids Code.

This evaluation summary is condensed to provide the specific installation, application and operation parameters necessary to maintain the subject systems in compliance with the Wisconsin Administrative Code – Comm 10.

DESCRIPTION AND USE

GeoFlex-S is a UL-listed single wall piping available in 3/4, 1, 1-1/2, 2 and 3 inch diameters. It has full compatibility with petroleum products, alcohols and their blends. GeoFlex-D is a double wall piping with UL-listed primary piping and secondary containment. It has full compatibility with petroleum products, alcohols and their blends. Tees and elbow fittings are zinc-coated

ductile iron. Couplings and adaptor fittings are stainless steel and are designed to be mechanically joined in the field.

GeoVent flexible vent pipe is used to vent vapors from underground storage tanks. It is used to contain and transfer the vapors and condensate from both petroleum and alcohol-based fuels. It is not intended to be used to transfer fluids. GeoVent is UL listed for use with petroleum products, alcohols and their blends.

TESTS AND RESULTS

The 3/4, 1, 1-1/2, 2 and 3 inch diameter GeoFlex-S and GeoFlex-D; and the 2 in. diameter GeoVent products have all been tested and listed to the appropriate UL Standard and are eligible for UL Follow-Up Service.

LIMITATIONS / CONDITIONS OF APPROVAL

- GeoFlex-S and GeoFlex-D carrier piping are approved as meeting the design and construction standards for underground piping as specified in **s. Comm 10.51 (2)**.
- Critical performance parameters for the GeoFlex-S and GeoFlex-D carrier piping:

GeoFlex™ Pipe Size (in.)	Bend Radius (in.)	Terminating Fitting Bend radius (in.) ²	Bulk Modulus ¹ (psi)
3/4	18	90	3667
1	18	90	2750
1 1/2	24	120	2053
2	36	180	1650
3	72	360	1467

¹: Calculated value assuming 73.4°F, nominal wall thickness, 50-year creep allowance, no contribution from barrier layer.

²: As measured in a horizontal plane into the tank or dispenser sump basin.

- GeoFlex and GeoVent piping are approved for installation without the flex connectors specified in **s. Comm 10.51 (2)(e)**.
- GeoFlex and GeoVent are approved for underground (buried) installations only. A maximum of 3 inches of low melting point materials may be exposed at the point where the piping enters a sump.
- Installation, use and maintenance of all products shall be in accordance with the manufacturer's recommendations and this approval. In the event of conflicts, the stricter requirement shall govern.
- Leak detection for the piping system shall be provided in accordance with **s. Comm 10.60 (2)**. The specific leak detection system must be shown on the plans that are submitted for review in accordance with **s. Comm 10.10**. Automatic line leak detectors and line tightness testing methods must be specifically approved for use with flexible piping in accordance with

s. Comm 10.125. (Note: Evaluation of these leak detection methods with the standard EPA protocol does not demonstrate acceptability for use with flexible piping.)

- The GeoFlex-D secondary containment jacket is approved for use as a secondary barrier for interstitial monitoring systems in compliance with **s. Comm 10.61 (7)**.

This approval will be valid through December 31, 2007, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement unless specified in this document.

Reviewed by: _____

Greg Bareta, P.E.
Engineering Consultant
Bureau of Petroleum Products and Tanks

Approved by: _____ Date: _____