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Department of Safety and  
Professional Services

Approval # 20120011

Division of Industry Services  
Storage Tank Regulatory Services  
P.O. Box 7837  
Madison, WI 53707-7837

# Wisconsin SPS 310 Material Approval

Equipment: OmegaFlex DoubleTrac Flexible Secondary  
Containment Piping

Manufacturer: OmegaFlex, Inc.  
451 Creamery Way  
Exton, PA 19341-2509

Expiration of Approval: December 31, 2015

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The DoubleTrac underground piping system as manufactured by Omega Flex, Inc., was evaluated for use as petroleum product, vent, or vapor recovery piping for aboveground, marina, and underground storage tank systems in accordance with **SPS 310.130(1)(b)**, **310.400(3)**, **310.500(5)**, and **310.640(2)** of the Wisconsin Administrative Code for Flammable and Combustible Liquids.

This evaluation summary is condensed to provide the specific installation, application and operational parameters necessary to maintain the subject systems in compliance with the Wisconsin Administrative Code – SPS 310.

## **DESCRIPTION AND USE**

The DoubleTrac flexible piping system is available in 1-in., 1.5-in., and 2-in. sizes with integral secondary containment (double-wall). The DoubleTrac flexible piping system consists of a corrugated stainless steel primary pipe, EFEP- fluoropolymer interstitial barrier layer, and a UV-stabilized Nylon12 protective outer layer. Fittings for the DoubleTrac flexible piping system are available threaded or flanged, in either a brass or stainless steel material; with both styles incorporating a self flaring design for the stainless steel primary pipe, and an integral drilled/tapped interstitial monitoring port. Sump entry penetration boots are either of a specifically recommended style for polymer sumps or are the OmegaFlex series rubber-less entry penetrations manufactured by S. Bravo Systems for fiberglass sumps.

OmegaFlex DoubleTrac flexible piping is approved for underground (buried), marine, and aboveground installations.

## **TESTS AND RESULTS**

OmegaFlex DoubleTrac flexible piping and fittings were found to comply with the current UL 971 Underwriters Laboratories' requirements, Listed for use as Integral Primary/Secondary Pipe System (PS), Normal Vent (NV), Vapor Recovery (RV) piping, and are suitable for use in the distribution of petroleum products, alcohol, and alcohol-gasoline mixtures including Motor Vehicle Fuels, Concentrated Fuels, High Blend Fuels, Aviation, and Marine Fuels.

The OmegaFlex DoubleTrac flexible piping was tested as part of a through penetration fire stopping product and met the requirements of the ASTM E 814 and UL 1479 standards for a two hour fire rating. Per the referenced standards, all parts of the assembly must meet the standards for containing a fire within the established test duration.

## **LIMITATIONS / CONDITIONS OF APPROVAL**

- OmegaFlex DoubleTrac flexible piping is approved as meeting the design and construction standards for underground flexible piping as specified in **s. SPS 310.500(2), SPS 310.500(5), and 310.520(1)(a)1..**
- OmegaFlex DoubleTrac flexible piping is approved for installation without the flex connectors specified in **s. SPS 310.500(2).**

**Exception:** for floating dock marine installations the DoubleTrac piping is not an approved flex connector; flexible double contained dock connectors will have to be provided by OmegaFlex engineering.

- OmegaFlex DoubleTrac flexible piping is approved for underground (buried), marine, and aboveground installations. Aboveground installations shall be protected as necessary to prevent failure of piping through impact or abrasion induced damage.

- The OmegaFlex DoubleTrac flexible piping is approved for use as a secondary barrier for interstitial monitoring systems in compliance with **s. SPS 310.400(3), 310.400(4), 310.500(5) and 310.515(8)(c)2..**
  - **Note:** After installation testing has been completed and prior to releasing for service, the Schrader valves or plugs used for interstitial testing shall be removed from all of the flexible pipe interstitial monitoring ports and check valves as provided by OmegaFlex shall be installed.
- **Critical performance parameters for the OmegaFlex DoubleTrac flexible piping:**

General- for all piping sizes:

- Allowable temperature operating range: -20 F to 120 F
- Bulk modulus values of the corrugated stainless steel primary pipe exceed minimum required values for all leak detection systems.

Size Specific:

Pipe Size (in.)	Minimum Bend Radius (in.) <sup>1</sup>	Maximum Allowable Working Pressure (psig) Primary / Secondary	Maximum Vacuum Rating Primary / Secondary
1	12	125 / 50	29" Hg
1 1/2	24	100 / 50	29" Hg
2	32	75 / 50	29" Hg

<sup>1</sup>: As measured in a horizontal plane into the tank or dispenser sump basin.

- The following tables list the DoubleTrac flexible piping recommended industry sump entry penetration boots (**Note:** other boots may also be available-confirm with manufacturer before using):

Single Wall Sumps:

Pipe Size (in.)	O.D. Nominal (in.)	Diversified Part No.	Blueline Part No.	APT Part No.	Bravo Part No.
1	1.55	UBS – 1.6	KFD1.6	FEB-100-SC	UGF-10-OFLX
1 1/2	2.30	UBS – 2.4	KFD2.5	FEB-175-SC	UGF-15-OFLX
2	2.93	UBS – 3.0	KFD3.0	FEB-200-SC	UGF-20-OFLX

Double Wall Sumps:

Pipe Size (in.)	O.D. Nominal (in.)	Diversified Part No.	Blueline Part No.	Bravo Part No.
1	1.55	UBM – 1.6	K2DW1.6	UGF-10-OFLX-D
1 1/2	2.30	UBM – 2.4	K2DW2.5	UGF-15-OFLX-D
2	2.93	UBM – 3.0	K2DW3.0	UGF-20-OFLX-D

- Tightness testing of the primary and secondary portions of the OmegaFlex DoubleTrac flexible piping shall be as specified by the manufacturer. A tightness test of the secondary portion only shall be considered equivalent to a test of the both the primary and secondary piping.
- Installation, use, and maintenance of all products shall be in accordance with the manufacturer's recommendations, this approval, and requirements as listed in SPS 310 and adopted standards. In the event of conflicts, the stricter requirement shall govern.
- Leak detection for the piping system shall be provided in accordance with **s. SPS 310.510(4)**. The specific leak detection system must be shown on the plans that are submitted for review in accordance with **s. SPS 310.100**. Automatic line leak detectors and line tightness testing methods must be specifically approved for use with flexible piping in accordance with **s. SPS 310.130(1)(a)**. (Note: Evaluation of these leak detection methods with the standard EPA protocol does not demonstrate acceptability for use with flexible piping.)

This approval will be valid through December 31, 2015, 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.

Effective Date: November 14, 2012

Reviewed by: \_\_\_\_\_  
Greg Bareta, P. E.  
Engineering Consultant  
Bureau of Petroleum Products and Tanks

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_