STATE OF WISCONSIN
Department of Agriculture,
Trade and Consumer Protection

Approval # 20230016
(Replaces 201900014)

Bureau of Weights and Measures
Storage Tank Regulation
P.O. Box 7837
Madison, WI 53707-7837

Wisconsin ATCP 93 Material Approval

Equipment: Universal Petro Pipe (UPP) EVOH Lined Primary Nonmetallic Semi-Rigid Underground Piping and Fittings

Manufacturer:

Franklin Fueling Systems, Ltd.
Olympus Close,
Whitehouse Industrial Estate
Ipswich, Suffolk,
United Kingdom IP1 5LN

Franklin Fueling Systems
3760 Marsh Road
Madison, WI 53718

Expiration of Approval: December 31, 2026

SCOPE OF EVALUATION

The Universal Petropipe (UPP) EVOH lined primary semi-rigid underground piping system as manufactured by Franklin Fueling Systems and Franklin Fueling Systems, Ltd., was evaluated for use as petroleum product piping for underground storage tank systems in accordance with **ATCP 93.130(1)(b) and 93.500** of the Wisconsin 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 – ATCP 93.

DESCRIPTION AND USE

The UPP EVOH lined primary semi-rigid piping and fittings consist of a non-permeable EVOH inner and high-density polyethylene (HDPE) outer layer, and are available in 1.0-in., 1.5-in., 2-in., 3-in., and 4-in. sizes. The 1.0-in., 1.5-in., 2-in., and 3-in. sizes are available in a coiled or stick coaxial arrangement with an integral secondary containment (double-wall). The 3-in. and 4-in. sizes are available in a stick coaxial arrangement with an integral secondary containment (double-wall). Secondary containment capability can also be provided for the 1.0-in., 1.5-in., 2-in., 3-in., and 4-in. sizes by installing the primary pipe within a UPP secondary containment sleeve stick. The secondary containment pipe sleeve stick consists of the same non-permeable EVOH inner and high-density polyethylene (HDPE) outer layer as the primary pipe, and is available in 1.5-in., 2.5 -in., 3-in., 4-in., and 5-in. sizes.

TESTS AND RESULTS

UPP EVOH lined semi-rigid piping and fittings were found to comply with the current Underwriters Laboratories' requirements for this class of 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.

LIMITATIONS / CONDITIONS OF APPROVAL

- UPP EVOH lined primary semi-rigid piping and fittings are approved as meeting the design and construction standards for underground piping as specified in **s. ATCP 93.500** and **93.520(1)(a)1.**

- UPP EVOH lined primary semi-rigid piping and fittings can be used as product, vent, and vapor recovery piping. Product piping is to be supplied as secondarily contained; vent and vapor recovery piping can be supplied single wall.

- Critical performance parameters for the UPP EVOH lined semi-rigid piping and fittings:

Primary Pipe- with (DW) and without secondary containment (SW)

UPP Pipe Size	Minimum Bend Radius (in.) SW / DW (Temperature at install)			Bulk Modulus (psi)[1]
	T ≥ 60 F	32 F > T < 60 F	T ≤ 32 F	
32/40mm (1")	29 / 38	48 / 62	68 / 85	14,977
50/63mm (1 ½")	30 / 39	49 / 63	69 / 86	11,767
63/75mm (2")	36 / 39	62 / 63	87 / 88	11,767
90/110mm (3")	88 / 158	124 / 236	158 / 315	11,767
110/125mm(4")	108 / 158	152 / 236	192 / 315	9,898

1: Bulk modulus values are based on testing by Veeder-Root for UPP Extra lined nylon 2-inch pipe. The other pipe sizes will have values very close to the 2-inch pipe.

- UPP EVOH lined primary semi-rigid piping is approved for installation without the flex connectors specified in **s. ATCP 93.500(2)**.

- UPP EVOH lined primary semi-rigid piping and fittings are approved for underground (buried) installations only.

- The UPP EVOH lined secondary containment piping and fittings are approved for use as a secondary barrier for interstitial monitoring systems in compliance with **s. ATCP 93.500(5) and 93.515(7).**

- 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. ATCP 93.515(8)**. The specific leak detection system must be shown on the plans that are submitted for review in accordance with **s. ATCP 93.100**. Automatic line leak detectors and line tightness testing methods must be specifically approved for use with semi-rigid piping in accordance with **s. ATCP 93.130(1)(a)**. (Note: Evaluation of these leak detection methods with the standard EPA protocol does not demonstrate acceptability for use with semi-rigid piping.)

This approval will be valid through December 31, 2026, 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: October 18, 2023

Reviewed by: _____ Date: 10/18/2023
Erik Otterson
Environmental Specialist
Storage Tank Regulation
Bureau of Weights and Measures

Approved by: _____ Date: 10/18/2023
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