



STATE OF WISCONSIN
Department of Safety and
Professional Services

Approval # 20120013
(Renewal for 20090003)

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

Wisconsin SPS 310

Material Approval

Equipment: APT XP-xxx-D and XP-xxx-SC Pressure,
Suction, and Vent Non-Metallic Underground
Flexible Piping

Manufacturer: Franklin Fueling Systems
3760 Marsh Rd.
Madison, WI 53718

Expiration of Approval: December 31, 2015

SCOPE OF EVALUATION

The APT XP-series pressure, suction, and vent nonmetallic underground piping, manufactured by Franklin Fueling Systems, were evaluated for use as piping for underground storage tank systems in accordance with **SPS 310.130(1)(b) and 310.500** 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 – SPS 310.

DESCRIPTION AND USE

APT XP-xxx-D is a nonmetallic, single wall piping that consists of four layers: an inner tube of black Nylon 12, a single aluminized mylar permeation barrier layer, a nylon braid reinforcement layer, and a blue outer cover of Nylon 12. APT XP-xxx-SC includes the same four layers and four additional layers: a clear mylar layer over the previous blue Nylon 12, a second blue Nylon 12 cover layer that is fabricated to produce an interstitial space for secondary containment, a single aluminized mylar permeation barrier layer, and a blue outer cover of Nylon 12.

TESTS AND RESULTS

APT XP-series pressure, suction, and vent piping were found to comply with the January 2, 2004 UL 971 requirements. XP-series a pressure, suction, and vent piping are suitable for use in the distribution of petroleum products, alcohols, and alcohol-gasoline mixtures including high blend, concentrated motor vehicle, aviation and marine fuels. The current XP-series a listings are available at www.ul.com under file number MH17457.

LIMITATIONS / CONDITIONS OF APPROVAL

- Critical performance parameters for the **APT XP-xxx-SC** flexible primary and secondary containment (co-axial) piping:

Product Code ¹	Pipe Size (in.)	Minimum Bend Radius (in.) ²	Bulk Modulus ³ (psi)
XP-100-SC	1	36	TBD
XP-150-SC	1 ½	36	5370
XP-175-SC	1 ¾	36	5260
XP-200-SC	2	36	5711

- 1: All products have integral secondary containment.
- 2: Terminating fitting bend radius is the same as minimum bend radius.
- 3: Corrected value from 3rd party test.

- Critical performance parameters for the **APT XP-xxx-D** vent piping:

Product Code	Pipe Size (in.)	Minimum Bend Radius (in.) ¹	Bulk Modulus ² (psi)
XV-200-D	2	36	NA

- 1: Terminating fitting bend radius is the same as minimum bend radius.
- 2: Vent containment piping is not for pressurized service, a bulk modulus value is not necessary for this application.

- APT XP-series pressure, suction, and vent piping are approved as meeting the design and construction standards for underground flexible piping as specified in **SPS 310.130**.

- APT XP-series pressure, suction, and vent piping are approved for installation without the additional corrosion protection specified in **SPS 310.520**.
- APT XP-series pressure, suction, and vent piping are approved for installation without the flex connectors specified in **SPS 310.500(2)**.
- APT XP-series pressure, suction, and vent piping are approved for underground (buried) installations only.
- 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 **SPS 310.510(4)**. The specific leak detection system must be shown on the plans that are submitted for review in accordance with **SPS 310.100**. Automatic line leak detectors and line tightness testing methods must be specifically approved for use with flexible piping in accordance with **SPS 310.130**. (Note: Evaluation of these leak detection methods with the standard EPA protocol does not demonstrate acceptability for use with flexible piping.)
- The APT XP-series secondary containment (-SC) jacket is approved for use as a secondary barrier for interstitial monitoring systems in compliance with **SPS 310.500(5)**.

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: January 1, 2013

Reviewed by: _____

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

Approved by: _____ Date: _____