



Approval #

970007-U (Replaces 910069-U
Rev.)

Safety & Buildings Division
201 East Washington Avenue
P.O. Box 7969
Madison, WI 53707

Wisconsin Material Approval

Material

Flexible Connectors - Flammable Liquids

Manufacturer

Anamet, Inc.
698 South Main Street
Waterbury, CT 06725

SCOPE OF EVALUATION

Flexpipe flexible connectors for use with flammable liquids, manufactured by Anamet, Inc., have been evaluated for conformance, in accordance with **ss. ILHR 10.51 (1) (b) 2. through 4., 10.51 (2) (e) and s. ILHR 10.55 (1), (2) (a) and (b)** of the current edition of the Wisconsin Flammable and Combustible Liquids Code, **Chapter ILHR 10.**

DESCRIPTION AND USE

The Flexpipe all metallic flexible connectors intended for use in rigid underground piping systems for flammable liquids to serve as a flexible junction to compensate for expansion, contraction, settling of the storage tank, and vibration stresses from power operated pumps. They have a length limitation of 8 feet.

These metallic flexible connectors are for use underground and in underground sump applications such as a direct connection to submersible pumping units in manways or emergency shut-off valves at the base of remote dispensing devices. The connectors do not have to be buried within sumps. It is also permissible to use these connectors with aboveground storage tanks.

The hose assembly consists of convoluted stainless steel inner hose and stainless braid. End assembly of the hose consists of stainless steel or ♣galvanized steel (Schedule 40, the average zinc coating thickness shall be a minimum of 0.0005 inch), fitting, collar, female union, a female union, a female pipe coupling and ring ferrule, i.e., iron hex wrench grip.

The following Flexpipe flexible connector model numbers are covered by this approval for use at the following maximum rated working pressures:

SIZE RATING AND ASSEMBLY DETAILS

<u>Model</u>	<u>Nominal ID (in.)</u>	<u>Male End Fittings (NPT)</u>	<u>Male End Fittings (NPT)</u>	<u>Maximum Working Pressure (psi)</u>
107545	1	1 inch	1 inch	50
107630	1	1 inch	1 inch	50
107549	1-1/4	1-1/4 inch	1-1/4 inch	50
107631	1-1/4	1-1/4 inch	1-1/4 inch	50
107546	1-1/2	1-1/2 inch	1-1/2 inch	50
107627	1-1/2	1-1/2 inch	1-1/2 inch	50
♣107872	1-1/2	2 inches	2 inches	50
107547	2	2 inches	2 inches	50
107548	3	3 inches	3 inches	50

<u>Model</u>	<u>Nominal ID (in.)</u>	<u>Male End Fittings (NPT)</u>	<u>Female Union Fittings (NPT)</u>	<u>Maximum Working Pressure (psi)</u>
107580	1	1 inch	1 inch	50
107584	1-1/4	1-1/4 inch	1-1/4 inch	50
107581	1-1/2	1-1/2 inch	1-1/2 inch	50
107582	2	2 inches	2 inches	50
107583	3	3 inches	3 inches	50

<u>Model</u>	<u>Nominal ID (in.)</u>	<u>Male End Fittings (NPT)</u>	<u>♠ Female End Fittings (NPT)</u>	<u>Maximum Working Pressure (psi)</u>
107632	1	1 inch	1 inch	50
107633	1-1/4	1-1/4 inch	1-1/4 inch	50
107628	1-1/2	1-1/2 inch	1-1/2 inch	50
107629	2	2 inches	2 inches	50
107734	2	2 inches	2 inches	50

107634	3	3 inches	3 inches	50
107638	1-1/2	1-1/2 inch	2 inches	50
<u>Model</u>	<u>Nominal ID (in.)</u>	<u>Female End Fittings (NPT)</u>	<u>Female End Fittings (NPT)</u>	<u>Maximum Working Pressure (psi)</u>
107659	1-1/2	1-1/2 inch	2 inches	50
107823	2	2 inches	2 inches	50
107733	3	3 inches	3 inches	50

NOTES:

- ♣ Fittings - Fittings used in this approval may be commercially available galvanized, Schedule 40 fittings. The average zinc coating thickness shall be a minimum of 0.0005 inch.
- ♠ Alternate Fitting Construction - Female Union or Female Coupling.

TESTS AND RESULTS

Flexpipe flexible connectors have been tested and listed by the Underwriters Laboratories, Inc., File No. MH16308 and UL of Canada, File No. CMH1430.

The Austin Flex Protectors FPI, FPII, FPIII and FPIV are designed to protect the flexible connector from contact with the soil. The Isolation Jacket (manufactured using resins from the ployolefin family), provides protection from corrosion, with a fungus resistance rating of 1 (a rating of 1 means the product will not deteriorate, decompose or degrade in underground service for at least 25-30 years), i.e., dielectric material.

Test of the Austin Flex Protectors, models FPI, FPII, FPIII and FPIV was done by the Toledo Testing Laboratory, Inc.

The engineered Flex Protector, a secondary containment boot, manufactured by Austin Engineering, Inc., models FPI, FPII, FPIII and FPIV (Austin Engineering, Inc., 834 Promenate Circle, Barberton, Ohio, 44203), are acceptable for use with Flexpipe flexible connectors, to provide corrosion protection required by s. **ILHR 10.51 (2)**.

LIMITATIONS OF APPROVAL

The Flexpipe flexible connectors are approved for use as part of an underground storage tank system in compliance with the construction standards of s. **ILHR 10.51 (2) (e)**.

Metallic connectors in contact with soil shall be provided with a corrosion protection system in accordance with s. **ILHR 10.51 (2)**, installed and maintained in accordance with the requirements of s. **ILHR 10.55**.

Each connector shall be tested after assembly for external leakage at aerostatics pressure of not less than the maximum rated working pressure or a hydrostatic pressure of not less than two times the maximum rated working pressure.

Listee's name and model designation stamped or etched on end fitting or a metal band secured around hose between end fittings.

Flexpipe flexible connectors shall be installed in accordance with the manufacturer's installation recommendations and shall be electrically isolated from all other buried metal components including pumps, piping, electrical conduit and tank components.

The Austin Flex Protector IV (FP4) meets the requirements of ss. **ILHR 10.51 (1) (b) 2.** through **4.**, **ILHR 10.51 (2)**, and **ILHR 10.55 (1) and (2) (a) and (b)**, when installed per manufacturer's instructions.

NOTE: The Weil service product Model TGMA with the Polyken 932 Wrap Kit, is not acceptable for use with the Flexpipe flexible connector as the required corrosion protection.

This approval will be valid through December 31, 2002, 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 not specified in this document.

Reviewed by: _____

Approval Date: _____ By: _____

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