Table 2: Description of Available Flexible Piping Systems

Company	Product	Diameter (Inch)	First Installation	Number of Installations	Installer Training	Minimum Bend Radius (Inches)	Test Pressure: Primary/ Secondary	Listing	Materials Warranty
Advanced Polymer Technology	Poly-Tech	.5, .75, 1, 1.5, 1.75, 2, 3	May 1992	2500 world wide (65-70% US)	on-site training required for first job, video training aids available	24 (1.5" pipe)	60/10 psi (1.5")	UL 971 ULC-ORD-C107.14, 107.19, 107.21 (see text for specific listings)	10 years
Ameron	Dualoy 3000/FLX II Dualoy 3000/FLX III	1.5 2.0 1.5 2.0	April 1995 June 1996	70 50	on-site training required for first job. Classroom training and slide program also available	24 30 24 30	50/10-15 psi 50/10-15 psi	UL 971 UL 971	10 years 10 years
Buffalo[1]	*Bufflex II*	*1, 1.5, 2*	*1989-90*	*300 (US) 700 (other)*	*on-site training required for first job*	*15*	*60/5-15 psi*	*ULC-ORD-C107.4, 107.19, 107.21*	*30 years + pollution liability insurance*
Containment Technologies	Perma-Flexx	.75, 1.65, 2	March 1993	1200 (75% North America, 25% South America)	training video; onsite training is optional	36	60/5 psi	UL 971 (primary only) ULC-ORD-C107.14, 107.19, 107.21	10 years
Environ	GeoFlex-S GeoFlex-D	.75, 1.5, 2, (3" -Spr. '97)	June 1992	Thousands worldwide	onsite training required for first job	24	60/10 psi	UL 971 ULC-ORD-C107.14, 107.19, 107.21	10 years 30 year system

NOTE: Only officially completed UL 971 listings are indicated in this table. **UL listings are for primary and secondary piping unless otherwise noted.** ULC-ORD-C107.14 is at present an unpublished draft document.

[1] Information not updated from the 1995 survey.

UL Product iQ™

QLXT.GuideInfo - Piping, Flammable Liquid, Underground

[Containment Products for Flammable and Combustible Liquids] (Transfer Pipe, Containment Sumps and Pipe/Sump Accessories) Piping, Flammable Liquid, Underground

See General Information for Transfer Pipe, Containment Sumps and Pipe/Sump Accessories

USE AND INSTALLATION

This category covers underground metallic and nonmetallic pipe and fittings (piping system) intended for use in the distribution and/or secondary containment of flammable liquids, and for the transmission of flammable vapors within fuel-dispensing systems.

These products are intended to be installed and used in accordance with the manufacturer's instructions, NFPA 30, "Flammable and Combustible Liquids Code," NFPA 30A, "Code for Motor Fuel Dispensing Facilities and Repair Garages," and applicable federal, state or local environmental regulations.

PIPING SYSTEM TYPES

The types of underground metallic and nonmetallic piping system constructions as indicated in the individual certifications are defined as follows, with $ prefix = "Underground Metallic" (or "UGM") and # suffix = "System," "Pipe" or "Fitting" as appropriate for metallic pipe, and $ prefix = "Underground Nonmetallic" (or "UGN") and # suffix = "System," "Pipe" or "Fitting" as appropriate for nonmetallic pipe:

$ Primary Carrier # (or $ PC #) — Pipe and/or fittings intended for continuous contact with the flammable liquids in a system under normal use conditions.

$ Secondary Containment # (or $ SC #) — Pipe and/or fittings intended to contain flammable liquids in a system during abnormal use conditions (such as primary carrier pipe leaks and sump spills).

$ Integral Primary/Secondary # (or $ PS #) — A single pipe and/or fitting constructed at the manufacturer that combines both primary carrier and secondary containment with an interstitial space that can be monitored for leakage.

$ Normal Vent # (or $ NV #) — Pipe and/or fittings intended to transfer displaced air or fuel vapors from an underground tank to grade during filling and provide atmospheric pressure equalization.

$ Vapor Recovery # (or $ VR #) — Pipe and/or fittings intended to transfer collected air and fuel vapors in a pressure or vacuum system to an underground tank during dispensing.

FUEL TYPES

The types of flammable liquid fuels for underground systems as indicated in the individual certifications are defined as follows:

Motor Vehicle Fuels (or MV Fuels) — Petroleum-based hydrocarbon fuels typically found in consumer dispensing stations, such as gasoline or diesel, including blended fuels with max 15% MTBE, 15% Methanol or 30% Ethanol (as identified in Table 15.1 of UL 971, "Nonmetallic Underground Piping for Flammable Liquids").

High-blend Fuels (or HB Fuels) — Motor vehicle fuels with higher than normal gasoline blends with max 50% Methanol or 50% Ethanol (as identified in Table 15.1 of UL 971).

Concentrated Fuels (or CT Fuels) — Motor vehicle and alternate unblended fuels for up to 100% concentrations of Toluene, Methanol and Ethanol (as identified in Table 15.1 of UL 971).

Aviation and Marine Fuels (or A&M Fuels) — Motor vehicle and specialty aviation or marine-use fuels for up to 100% kerosene or leaded gasoline (as identified in Table 15.1 of UL 971).

RATINGS, MARKINGS AND INSTRUCTIONS

The piping is intended for use only with the flammable and combustible liquids or vapors as specified in the individual certifications and on the product at the pressure and/or vacuum not exceeding that marked on the product.

The piping is intended to be assembled and installed only by persons qualified by the manufacturer. This piping is intended for underground use only in soil that has not been exposed to flammable liquids or other contaminants.

PRODUCT IDENTITY

One of the following product identities appears on the product:

Underground Metallic (or UGM) ($) (#) for (*)

Underground Nonmetallic (or UGN) ($) (#) for (*)

($) = One of the following:
Primary Carrier (or PC)

Secondary Containment (or SC)