



SPEARS® LabWaste™ CPVC Corrosive Waste Drainage System

LW-2-0810

**Proven Solvent Cement Joining Eliminates Troublesome
Fusion Equipment, Mechanical Joints & Elastomer Problems**
**NSF® Certified for Corrosive Waste Use & Listed to ASTM F 2618
Specification For CPVC Pipe & Fittings for Chemical Waste Drainage Systems
Meets IAPMO IGC 210 and ICC-ES PMG-1018 For CPVC Chemical Waste Systems
U.S. Patent No. 7,178,557**



- Complete System of Pipe, Fittings & Adapters
- Meets 25/50 Flame & Smoke Requirement for use in Return Air Plenums
- Non-Pressure Drainage Service to 220° F
- All CPVC Construction in a Full Assortment of Standard DWV Patterns
- Accessories including Drains, Neutralization Tanks, and Dilution Traps
- Specially Formulated One-Step Solvent Cement Provides Chemical Resistance Equal to System Pipe & Fittings – Now in Special Yellow Color

Chemical & Corrosion Resistant CPVC

One of the key advantages of Spears® **LabWaste™** CPVC System is its excellent resistance to a broad range of corrosive environments. CPVC is inert to most mineral acids, bases, salts and aliphatic hydrocarbons, and compares favorably to other plastics in these chemical environments.

General Chemical Resistance Overview:

Weak Acids	Excellent	Salts	Excellent
Strong Acids	Excellent	Aliphatic Solutions	Good
Weak Bases	Excellent	Halogens	Good-Fair
Strong Bases	Excellent	Strong Oxidants	Good-Fair

The **LabWaste™** CPVC System has been developed for use in Academic, Research, and Institutional Laboratory chemical waste drainage applications. These plumbing systems are characterized by the routine disposal of a wide variety of hot and cold chemical wastes in accordance with prudent laboratory practices for drainage disposal.

Manufactured to ASTM F 2618 in Full Line of Drainage Pattern Fitting Configurations

Spears® broad line of **LabWaste™** CPVC pipe & fittings are manufactured to ASTM F 2618 Specifications for CPVC Pipe & Fittings for Chemical Waste Drainage Systems and produced in ASTM D 3311 drainage patterns or to manufacturer's specifications. Standard configurations are available in nominal sizes of 1-1/2" through 24" with many specialty fittings and accessories, like dilution traps, (water dilution being critical in the prevention of exothermic chemical interactions within all plumbing systems).

NSF® Certified For Corrosive Waste

Spears® **LabWaste™** Corrosive Water Drainage System of pipe, fittings, and cement is tested and certified for use in corrosive waster systems by NSF® International to ASTM F 2618, tested to IAPMO IGC 210, Certified to the Uniform Plumbing Code and ICC-ES listed to PMG-1018 for CPVC Chemical Waster Systems.

Cost Saving Solvent Weld Joining Eliminates the need for Electro-Fusion Joints and for Mechanical Joint Connections in Concealed Spaces

A proven joining method reliably used for over 50 years, Solvent Cement Welding requires no special tools, no costly fusion equipment, and provides a solid, chemically bonded joint for easy installation, repairs or alterations. Most importantly, solvent cement joints end problems typical of polypropylene system installation, such as mechanical connector pullout, maintaining mechanically sealed joints, leaks from fusion wire corrosion, and cumbersome fusion joining methods. Saves time, saves cost, saves worry!

A Flame & Smoke Rated Piping System

Spears® **LabWaste™** system components have been evaluated and Listed by Underwriters Laboratories of Canada (ULC®) as finished products for surface burning characteristics under CAN/ULC S102.2 and tested to UL 723/ASTM E 84, for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1), and showed a flame spread of < 25 and a smoke developed index of < 50.

Applicable Conformance Standards & Certifications

Spears® **LabWaste™** CPVC Corrosive Waste Drainage System is a complete system of pipe, fittings and solvent cement independently (3rd party) tested, evaluated and certified by the following laboratories and agencies. Each of these approvals is routinely monitored through an ongoing program of periodic inspection and testing by the certifying agency.

- **ASTM F 2618** - Certified for corrosive waste and use by NSF® International (NSF-cw) in accordance with ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waster Drainage Systems*.
- **Uniform Plumbing Code** - Certified for use in accordance with the Uniform Plumbing Code (UPC®) by NSF® International as specified in IAPMO IGC 210, *Interim Guide Criteria for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Limited Chemical Waster Drainage System*. (NSF-U.P.Code).
- **International Plumbing Code** - Spears® **LabWaste™** CPVC system has been approved for use in accordance with the International Plumbing Code (IPC®) by the International Codes Council Evaluation Services (ICC-ES) in accordance with ICC-ES PMG Listing PMG-1018 for Spears® **LabWaste™** CPVC Corrosive Waste Drainage System (See ICC-ES PMG Listing PMG-1018 at www.icc-es-pmg.org).

Flammability & Surface Burning Characteristics

Flammability	UL94	
Material Rating	V-0	UL94: <i>Tests for Flammability of Plastic Materials</i>
Flame & Smoke Rating	CAN/ULC S102.2 Listed ¹ UL 723/ASTM E 84 Tested ²	
Flame Spread:	<25	CAN/ULC S102.2: <i>Surface Burning Characteristics</i> UL723/ASTM E 84: <i>Surface Burning Characteristics</i>
Smoke Developed:	<50	(NFPA 255, ANSI/UL 723 and UBC 8-1)

Notes:

1 - ULC® listing based on test of finished product, pipe and fittings solvent cement welded as assemblies.

2 - UL 723/ASTM E 84 test by Southwest Research Institutes™ (SwRI™) Department of Fire Technology under project No. 1.10083.01.269d, September 20, 2004, test of empty (dry) CPVC pipe with dry fit end caps and material in the ceiling position.

Spears® **LabWaste™** - A Complete System

Spears® **LabWaste™** is offered as a complete system of pipe, fittings, and solvent cement. A broad assortment of additional accessories are available including Drains, Neutralization Tanks, Dilution Traps, Valves, Unions, Flanges and Adapters.

Fitting configurations are produced to applicable DWV patterns of ASTM D 3311, *Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fitting Patterns*, and various specialty patterns to manufacturer's specifications. All drainage fittings with 90° angles (sanitary tees, elbows, etc.) have socket pitch to maintain approximately 1/4" per foot drainage.

System Integrity – Lifetime Warranty

Spears® **LabWaste™** products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All Spears® **LabWaste™** components must be used in order to ensure a sound piping system. Substitution of other products for Spears® **LabWaste™** pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located at the end of the manual) does not cover problems occurring as the direct result of the use of products other than Spears® **LabWaste™** system products, or products and materials not compatible with CPVC materials.

System Transition Adapters

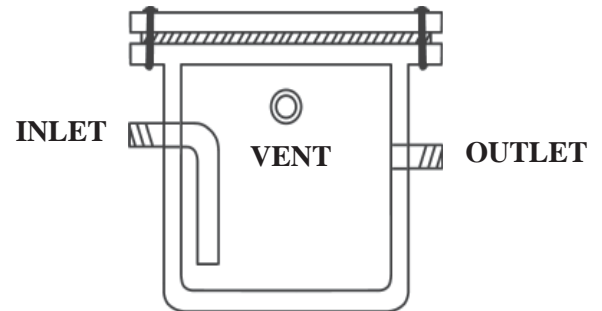
Transitioning from PP, PVDF, Glass, Duriron, or other systems to Spears® **LabWaste™** CPVC is easy using one of Spears® special transition adapters available in sizes 1-1/2" through 4" piping.

Spears® LabWaste™ Custom System Accessories

Acid Neutralization/Dilution Tanks for Use With LabWaste™ CPVC Systems

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or injure a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from being discharged into the plumbing system without being neutralized or treated. Spears® offers a standard selection of HDPE tanks in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities to meet these needs. Tanks can also be produced in virtually any custom size, shape, or connection configuration. Contact Spears® Technical Services with desired specifications for custom quotation. See Spears® price schedule LWNT-1, **LabWaste™** Neutralization Tanks & Accessories for additional information on the following features and options.

- CPVC Tanks 5-gallon to 55-gallon
- HDPE Tanks 5-gallon to 3000-gallon
- Optional Vented Tanks
- Socket (CPVC), Thread or Flanged Connection
- Inspection & Manhole Port Options
- Pedestrian or Vehicular Traffic Cover Options
- Tank Extension Options
- Limestone Chip Neutralization Medium



LabWaste™ Floor Drains & Cleanouts

Spears® **LabWaste™** CPVC Floor Drains are available for connection to 1-1/2" through 4" drainage pipe. Standard drains have adjustable 5" round CPVC grates and can be ordered with optional CPVC 1/8" perforated sediment strainer to trap debris. CPVC drains also available with adjustable round Stainless Steel grates in 5", 6", 7" or 8" diameters. Standard CPVC Floor Cleanouts have 5" round, adjustable Stainless Steel access covers. All Floor Drains and Floor Cleanouts are available with optional membrane plate for clamping housing to waterproof membranes when used in floor installations.



Sample Engineering Specification

Special drainage systems for corrosive chemical or acid waste shall be manufactured from CPVC Type IV, ASTM Cell Classification 23447. All system pipe and fittings shall be manufactured in accordance with ASTM F 2618 and certified by NSF® International for use in corrosive waste drainage systems with the NSF-cw mark. All pipe and fittings shall be CAN/ULC S102.2 Listed for flame spread of less than 25 and smoke development of less than 50 as designated on the pipe marking or fitting package labeling. All pipe markings shall be accompanied by a yellow stripe for identification of CPVC chemical waste system. All fittings shall be CPVC drainage patterns meeting the requirements of ASTM D 3311 or the manufacturer's specifications, as applicable. Joining method for pipe and fittings shall be solvent cement welding. Solvent cement shall be a "one-step" primerless type CPVC cement specially formulated for resistance to corrosive chemicals and manufactured in accordance with ASTM F 493. All pipe, fittings, and cement shall be supplied together as a system with a Lifetime Warranty, as Spears® **LabWaste™** CPVC Corrosive Waste Drainage Systems manufactured by Spears® Manufacturing Company.

SPEARS® MANUFACTURING COMPANY LIMITED LIFETIME WARRANTY

Except as otherwise mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

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For LabWaste™ Product Line Information See Publications:

- LW-1 **LabWaste™** CPVC Corrosive Waste Drainage System Prices
- LWNT-1 **LabWaste™** Standard CPVC & HDPE Neutralization Tanks Prices
- LW-4 **LabWaste™** CPVC Corrosive Waste Drainage System Technical Information

Not for Use With Compressed Air or Gases

Progressive Products From Spears® Innovation & Technology



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