



## Patented

Spears® **LabWaste®** CPVC Drainage System is a complete system of pipe, fittings & solvent cement featuring excellent chemical resistance, fire performance properties, light weight and ease of installation. Designed and specifically tested for use in commercial, industrial, and institutional drainage system applications involving corrosive/acid wastes, this unique product developed by Spears® has been awarded a U.S. Patent, No. 7,178,557. Available in nominal 1-1/2" through 24" Iron Pipe Size (IPS) diameters.

**IMPORTANT** - The information in this section is introductory only. Please refer to Spears® publication, **LabWaste®** CPVC Technical Information & Installation Guide, for additional details and technical information.

## Laboratory Applications

Its broad range of resistance to chemical and corrosive wastes make Spears® **LabWaste®** CPVC systems very well suited for commercial, institutional and academic laboratory drainage installations. These applications are best characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. Due to the interactions potentially encountered in multi-chemical laboratory drainage disposal, Spears® recommends routine flushing of the system with water during disposal as a part of prudent laboratory practices. A properly designed and installed **LabWaste®** CPVC system provides total dilution and disposal needs for years of dependable service.

## Industrial & Commercial Special Waste Applications

Spears® **LabWaste®** CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. For non-laboratory applications, refer to CPVC pressure system resistance data in this manual for appropriate chemical resistance guidelines. DO NOT follow **LabWaste®** Chemical Resistance Table recommendations for laboratory use in Spears® technical information guide. Please contact Spears® Technical Services for additional information.

## Marine & Off-Shore Applications

Spears® **OceanTUFF™** (a.k.a. **LabWaste®**) CPVC drainage products are Type Approved by American Bureau of Shipping (ABS) for use in marine and off-shore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-2-PDA available on the ABS website at [www.eagle.org](http://www.eagle.org).

## Other Applications

Spears® **LabWaste®** CPVC products can be installed in many applications where high-temperature and/or corrosive liquids are drained. Food processing, commercial kitchens, produce canning and juice plants, dairy and yogurt product processing, greenhouse corrosive fertilizer and pesticide wash down, and other high-temperature wash down applications just to name a few.

## Chemical Resistance

Spears® **LabWaste®** CPVC systems are inert to most mineral acids, bases, salts and aliphatic hydrocarbons, and compares favorably to other non-metals 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

### Chemical Resistance Evaluation

Chemical resistance evaluation recommendations for a broad range of chemicals in Laboratory Applications are found in Spears® publication, LW-4, *Spears® LabWaste® CPVC Corrosive Waste Drainage System, Technical Information & Installation Guide for industrial and commercial systems* intended for dedicated service and other non-laboratory applications, consult conventional CPVC pressure system resistance data for appropriate chemical resistance guidelines.

## Product Certifications & Approvals

Spears® **LabWaste®** CPVC Corrosive Waste Drainage System is a complete system of pipe, fittings and solvent cement. Manufactured to ASTM F 2618, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems. Conformance of Spears® **LabWaste®** CPVC pipe, fittings, and solvent cement to these requirements has been independently (3rd party) tested, evaluated and certified by NSF International and listed with ICC-ES PMG program for Plumbing and Mechanical Code conformance. Each of these approvals is routinely monitored through an ongoing program of periodic inspection and testing by the certifying/approving agency.



### ASTM F 2618 Performance Standard

Certified for corrosive waste end use by NSF International in accordance with ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems (NSF®-cw)*.

### NSF® ORD 10222 For Use in Canada

Certified for use in Canada by NSF International under the Standards Council of Canada as an Other Recognized Document (ORD) that defines the product specific requirements for Chlorinated Poly Vinyl Chloride (CPVC) Chemical Waste Systems, in accordance with ASTM F 2618 requirements.

### Uniform Plumbing Code

Certified for use in accordance with the Uniform Plumbing Code (UPC) by NSF International (NSF® U.P. Code) as specified in ASTM F2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage System*. Additionally approved for use in accordance with the Uniform Plumbing Code (UPC) by the International Codes Council Evaluation Services (ICC-ES), in accordance with PMG Listing Criteria for Chlorinated Poly Vinyl Chloride (CPVC) System of Pipe Fittings and Solvent Cement Used in Chemical Waste Systems, LC1007 (See PMG Listing No. PMG-1018 at [www.icc-es-pmg.org](http://www.icc-es-pmg.org)).

### International Plumbing Code

Approved for use in accordance with the International Plumbing Code (IPC) by the International Codes Council Evaluation Services (ICC-ES) in accordance with *PMG Listing Criteria for Chlorinated Poly Vinyl Chloride (CPVC) System of Pipe Fittings and Solvent Cement Used in Chemical Waste Systems*, LC1007 (See PMG Listing No. PMG-1018 [www.icc-es-pmg.org](http://www.icc-es-pmg.org)).

### Uniform Mechanical Code

Listed by the International Codes Council Evaluation Services (ICC-ES PMG) in accordance with ASTM E84 and UL® 723 for compliance with requirements of the Uniform Mechanical Code® (UMC) for use in return air plenums by having a Flame Spread/Smoke Development of less than 25/50, respectively, as specified in PMG-1278 at [www.icc-es-pmg.org](http://www.icc-es-pmg.org).

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### Canadian Surface Burning Characteristics

Listed by Underwriters Laboratory of Canada (ULC®) for evaluation of Flame Spread and Smoke Density in accordance with CAN/ULC S102.2 *Standard Test Method for Surface Burning Characteristics of Floor Coverings, and Miscellaneous Materials and Assemblies* for use in Canada. This evaluation has been made to finished product, as noted in Fire Performance Properties.

### Flammability Rating

Material tested to UL94, *Tests for Flammability of Plastic Materials for Parts in Devices and Appliances*, with a rating of V-0.

### Pipe Dimensions

Spears® LabWaste® CPVC Drainage System products produced to ASTM F 2618 have the same dimensional specifications for pipe as for Schedule 40 CPVC through 24" nominal IPS diameters. See corresponding pipe dimensions section in this manual.

### Fittings Configurations

Spears® manufactures a wide variety of LabWaste® CPVC drainage pattern fittings produced to ASTM F 2618. See Spears® publication, LabWaste® CPVC Technical Information & Installation Guide for fitting details.

### Joining Methods

#### Solvent Cement Welding

Spears® LabWaste® CPVC Drainage System piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC corrosive waste applications. Follow basic solvent cementing guideline under the Installation section using only LabWaste® CPVC one-step solvent cement.

#### Transitions & Other Connections

Standard threaded and flanged connections can be made using system components. A variety of special connectors are produced for transition to polypropylene, Duriron and glass systems waste piping systems.

Please refer to Spears® publication, LabWaste® CPVC Technical Information & Installation Guide, for Physical Properties, Engineering Data, and LabWaste® Chemical Resistance Guide for laboratory applications. **DO NOT** use Chemical Resistance Guide for Pressure Piping contained in this section.