



SPEARS® LabWaste™ CPVC Corrosive Waste Drainage System

LW-2-1109

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 AC252 For CPVC Chemical Waste Systems U.S. Patent No. 7,178,557



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

Chemical & Corrosion Resistant CPVC

One of the key advantages of the **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 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

The **LabWaste™** CPVC System has been developed for use in academic, research, and institutional laboratory chemical waste drainage applications, which is characterized by the routine disposal of a wide variety of hot and cold chemicals accompanied by water for the purpose of dilution and flushing.

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

Spears® broad line of **LabWaste™** CPVC pipe and fittings are manufactured to ASTM F 2618, Specification 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.

NSF Certified For Corrosive Waste

Spears® **LabWaste™** CPVC Corrosive Waste Drainage System of pipe, fittings, and cement is tested and certified for use in corrosive waste systems by NSF International to ASTM F 2618, tested to IAPMO IGC 210 and ICC-ES AC252 for CPVC Chemical Waste Systems.

Cost Saving Solvent Weld Joining Eliminates Troublesome Electro-Fusion and Mechanical Connections

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, maintenance on elastomer sealed joints, internal fusion wire corrosion, and cumbersome fusion joining methods. Saves time, saves cost, saves worry!

ULC Flame & Smoke Rated Components

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, flame spread <25 and smoke development <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 end 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 Waste 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 Waste Drainage System*. (NSF-U.P.Code).
- **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 *Acceptance Criteria for CPVC Systems of Pipe, Fittings and Solvent Cement Used in Chemical Waste Systems, AC252*. See ICC-ES Evaluation Report No. ESR-1214 at www.icc-es.org.

Flammability & Surface Burning Characteristics

Flammability	UL94,	<i>UL94: Tests for Flammability of Plastic Materials for Parts in Devices and Applications</i>
Material Rating	V-0	
Flame & Smoke Rating Pipe & Fittings	CAN/ULC S102.2 Listed ¹	<i>CAN/ULC S102.2: Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials</i>
Flame Spread:	<25	
Smoke Developed:	<50	

Notes:

¹ Flame spread and smoke development ratings based on tests of finished product, pipe and fittings solvent cement welded as assemblies.

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

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

Fitting configurations are produced to applicable DWV patterns of ASTM D3311, 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

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 insure 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 Warranty (located at end of this manual) does not cover problems occurring within the piping system as the direct result of non-use of Spears® **LabWaste**™ system products.

System Transition Adapters

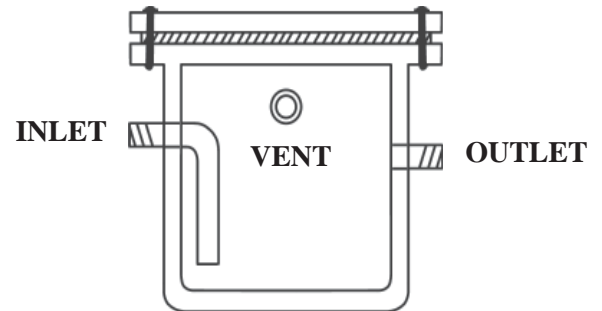
Easy transition from PP/PVDF, Glass or Duriron systems to **LabWaste**™ CPVC using one of these special adapters for sizes 1-1/2" through 4" piping.

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 Schedule 40 CPVC 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 shall be CAN/ULC S102.2 Listed for flame spread and smoke development with rating designated on the pipe marking. 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 D3311 and the manufacturer's specifications, as applicable. All fittings shall be CAN/ULC S102.2 Listed for flame spread and smoke development and rating designated on the original package labeling. 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 F493. All pipe, fittings, and cement shall be supplied together as a system, as Spears® **LabWaste™** CPVC Corrosive Waste Drainage Systems manufactured by Spears® Manufacturing Company.

SPEARS® MANUFACTURING COMPANY LIMITED WARRANTY

Except as otherwise mandated by law, Spears® Manufacturing Company warrants that the goods which have been directly manufactured by them shall be free from defects in material and workmanship for a period of one (1) year, from the date of shipment. CUSTOMER AGREES THAT THIS WARRANTY SHALL BE EFFECTIVE SO LONG AS THE GOODS ARE USED SOLELY FOR THE NORMAL PURPOSES FOR WHICH THEY ARE INTENDED AND IN CONFORMANCE WITH INDUSTRY ESTABLISHED ENGINEERING, INSTALLATION, OPERATING, AND MAINTENANCE SPECIFICATIONS, RECOMMENDATIONS AND INSTRUCTIONS. VIOLATION THEREOF SHALL VOID THIS WARRANTY AND RELIEVE COMPANY FROM ANY OBLIGATION UNDER THIS WARRANTY. COMPANY CANNOT AND DOES NOT ASSUME RESPONSIBILITY, AND EXPRESSLY DISCLAIMS ANY LIABILITY, DUE TO CUSTOMER'S, ANY INSTALLER'S OR END USER'S FAILURE TO COMPLY WITH SUCH SPECIFICATIONS, RECOMMENDATIONS AND INSTRUCTIONS,

If Customer receives any goods that appear to be defective, upon receipt of a Return Authorization (RA#) issued by Spears® Customer Services Department, Customer may return such questionable goods. The material must be returned prepaid to Company at 15853 Olden Street, Sylmar, California 91342 along with completed Return Authorization documentation. After examination if the goods are determined to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective goods, or reimburse Customer for the cost of such goods. This shall be Customer's only remedy. All costs of shipping such questionable goods and any replacements thereof to and from Company's facility shall be borne by Customer. Customer agrees that Company will not be responsible for other parts or labor in connection with repairing, replacing, or returning such goods while goods are in possession of Company for analysis, nor for any delays beyond Company's reasonable control (including, with limitation, delays due to unavailability of materials, equipment, other supplies or labor, strikes, governmental regulation or other acts of God), provided that any delay shall toll the warranty period for the same amount of time as the delay itself.

COMPANY EXTENDS ONLY THIS WARRANTY AND EXPLICITLY WAIVES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, ORAL OR STATUTORY (INCLUDING ANY IMPLIED WARRANTIES OR AFFIRMATION, SUITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) APPLICABLE TO THE GOODS. NO AFFIRMATION BY COMPANY OR ANY OF ITS REPRESENTATIVES, BY WORDS OR CONDUCT, SHALL CONSTITUTE A WARRANTY. THIS WARRANTY MAY NOT BE EXTENDED, ALTERED OR OTHERWISE MODIFIED EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY.

BY ITS ACCEPTANCE OF THE GOODS, CUSTOMER HEREBY SPECIFICALLY AND EXPRESSLY WAIVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMPANY, INCLUDING WITHOUT LIMITATION LIABILITY PREDICATED UPON STRICT LIABILITY OR TORT, AND ALL DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING BUT NOT LIMITED TO ALL KNOWN, UNKNOWN, FORESEEABLE, UNFORESEEABLE, ABSOLUTE, CONTINGENT, LIQUIDATED, NON-LIQUIDATED, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES, AND WITH RESPECT TO THE GOODS, THEIR RETURN, REPAIR, RESTORATION AND REPLACEMENT. WITH RESPECT TO SUCH WAIVER, CUSTOMER HEREBY EXPLICITLY WAIVES CALIFORNIA CIVIL CODE §1542 WHICH STATES "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THIS RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY ADVERSELY AFFECTED HIS SETTLEMENT WITH DEBTOR" AND ALL OTHER SIMILAR STATUTORY, COMMON AND CASE LAW RIGHTS, DEFENSES AND LIMITATIONS.

Having independently inspected a sample of the goods as fully as desired or having refused to make such examination upon acceptance of delivery of the goods, and except as otherwise herein provided, Customer hereby accepts the goods in its "AS IS" condition "WITH ALL FAULTS" without any other warranty, expressed or implied, and hereby accepts and assumes the entire risk and cost of all necessary servicing, repairs and remedy thereof.

For LabWaste™ Product Line Information See Publications:

LW-1	LabWaste™ CPVC Corrosive Waste Drainage System Prices
LWNT-1	LabWaste™ Standard CPVC, PP & 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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