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RESEARCH REPORT: RR 5567
EFFECTIVE DATE: 08/01/2019
EXPIRATION DATE: 08/01/2020
Telephone: 800-862-1499

GENERAL APPROVAL - Renewal - Spears LabWaste™ CPVC, Corrosive Waste Piping System, manufactured by Spears Manufacturing Co. See attached list of approved models.

DETAILS

These products include pipes and fittings for waste and vent systems serving corrosive waste discharge systems. These products may be joined using Spears LW-5 "One-Step" Solvent Cement specially formulated per ASTM F493 for corrosive/chemical waste application. These products have been tested in accordance with NSF 14 for use in corrosive chemical waste drainage systems as a Special Engineered (SE) product. These products are suitable for contact with a broad range of chemicals. All system pipes and fittings are Schedule 40 CPVC drainage patterns and meet the requirements of Standards ASTM D1784, ASTM D331, and ASTM D2618.

The approval is subject to the following conditions:

1. These products may be installed above or below the ground in plumbing drainage systems that convey chemical wastes. The mechanical joints shall not be construed to be slip joint connections.
2. Pipe and fittings 1-1/2-inch through 6-inch have been tested under the requirements of UL 723 and ASTM E84 and do not exceed a flame spread index of 25 and a smoke developed index of 50. These products may be installed in ducts or plenums in accordance with Section 95.602.2 of the Los Angeles Mechanical Code (LAMC), 2017 Edition.
3. Solvent Cement Joints/Welding shall be made according to the manufacturer's printed instructions and using Spears LW-5 "One-Step" Solvent Cement.
4. Plumbing plans shall be approved by Mechanical Plan Check section for each new chemical waste discharge system.
5. This approval applies only to the provisions of the Los Angeles Plumbing Code (LAPC), 2017 Edition and the LAMC, 2017 Edition. It shall not be construed to be an approval under the provisions of the City of Los Angeles Building or Electrical Codes. The installation of these

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products passing through fire rated walls or floor slabs shall be in compliance with the Los Angeles Building Code, 2017 Edition.

6. The installation of these products shall comply with the manufacturer's printed instructions, recommendations, and Section 94.811 of the LAPC, 2017 Edition. These products shall not be installed in direct sunlight.
7. Clearance from the Industrial Waste Division (phone: 323-342-6200) shall be required and obtained prior to beginning construction.
8. A concurrent approval of the mechanical plans from the Fire Department may be required when these products are used in systems carrying hazardous materials exceeding the amount specified in the Section 91.307 of the Los Angeles Building Code, 2017 Edition.
9. Vents serving a chemical waste drainage system and fixtures discharging chemical wastes into any chemical waste drainage system shall not be combined with vents from any other services.
10. Building owner shall make and keep a permanent record of the location of all drainage and vent piping serving chemical waste discharge systems.
11. Installation of these products in buildings of Type I non-combustible construction and other types of constructions may be allowed with the prior approval of Building Plan Check and Inspection Sections. Building Section shall determine how these products shall be enclosed and the fire ratings of the enclosures. Building Plans shall be approved showing how the product will be enclosed in fire resistive construction.
12. Vertical and horizontal pipe supports shall comply with the manufacturer's instructions and the LAPC, 2017 Edition. Hangers shall not be over tightened to restrict pipe movement or cut into pipe.
13. Where piping penetrates fire resistive construction it shall either be insulated with material of equal or exceeding fire rating of the floor or wall being penetrated a minimum of two feet on each side of the penetration, or the penetration shall be caulked with an approved fire sealant of the appropriate fire rating.
14. The pipes and fittings shall be identified with the manufacturer's name or trademark or logo, material, model number, NSF Certification Mark NSF-cw S. E. and size.
15. All pipe markings shall be accompanied by a yellow stripe indicating CPVC chemical waste system.

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DISCUSSION

Mechanical Testing Laboratory reviewed recent test reports and current listing certificates. The products have been tested in accordance with Standards ASTM D1784, ASTM E84, ASTM F493, ASTM F2618; NSF 14 and UL 723; and are listed by ICC-ES LLC and NSF International. The materials and construction are equivalent to that prescribed by the Los Angeles Municipal Code in quality, strength, effectiveness, durability, and safety.

For this General Approval to be valid on any individual construction project in the City of Los Angeles, an engineer or inspector of the Department of Building and Safety must make a determination that all conditions of the General Approval required to provide equivalency have been met in the case of each construction project under consideration.

This approval is granted under Sections 94.103, 94.301, 94.701, and 94.811 of the Los Angeles Plumbing Code, 2017 Edition; and Sections 95.105, 95.302.2.1, and 95.602.2 of the Los Angeles Mechanical Code, 2017 Edition.

Approved by:



Irene Pool
Mechanical Testing Laboratory
Permit and Engineering Bureau

**SPEARS MANUFACTURING COMPANY
 LABWASTE CPVC CORROSIVE PRODUCTS (PIPE & FITTINGS)**

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LIST OF APPROVED MODELS

Model Number	Size, in	Description
Pipe		
	1 1/2",2",3",4",6",8",10",12"	Schedule 40 CPVC Spears LabWaste
Fittings		
P099	XXXX	TRANSITION COUPLING (H x Comp)
P100	1 1/2",1 1/4",2",3",4",6",8",10",12"	COUPLING (H x H)
P101	1 1/2",1 1/4",2",3",4",6",8"	FEMALE ADAPTER (FPT x H)
P102	2"x 1 1/2",3"x 1 1/2",3"x 2",4"x 2",4"x 3",6"x 4"	INCREASER REDUCER (H x H)
P103P	1 1/2",1 1/2" x 1 1/4",2"	TRAP ADAPTER W/NUT (SPIG x SLIP)
P105	1 1/2",2",3",4",6",8"	CLEANOUT ADAPTER (SPIG x FPT)
P105X	1 1/2",2",3",4",6",8"	CLEANOUT ADAPTER W/PLUG (SPIG)
P106	1 1/2",2",3",4",6",8"	CLEANOUT PLUG (MPT)
P107	10" x 8",12" x 10",2" x 1 1/2",3" x 1 1/2",3" x 2",4" x 2",4" x 3",6" x 4",8" x 4",8" x 6"	FLUSH BUSHING (SPIG x H)
P109	1 1/2",1 1/4",2",3",4",6"	MALE ADAPTER (MPT x H)
P110	1 1/2",2 1/2",2",3",4",6"	COUNTERSUNK PLUG (MPT)
P116	1 1/2",2",3",4",6",8"	CAP (SOCKET)
P300	1 1/2",2",3",4",6",8",10",12"	1/4 BEND (H x H)
P302	1 1/2",2",3",4",6",8",10",12"	1/4 BEND, STREET (SPIG x H)
P304	1 1/2",2",3",4"	1/4 BEND, LONG SWEEP (H x H)
P309	1 1/2",2",3",4"	1/4 BEND, STREET LONG SWEEP (H x Spig)
P319	1 1/2",2",3",4"	1/6 BEND (H x H)
P320	1 1/2",2",3",4",6"	1/6 BEND, STREET (H x SPIG)
P321	1 1/2",1 1/4",2",3",4",6",8",10",12"	1/8 BEND (H x H)
P323	1 1/2",2",3",4",6",8",10",12"	1/8 BEND, STREET (H x SPIG)
P324	1 1/2",2",3",4",6",8",10",12"	1/16 BEND (H x H)
P326	1 1/2",2",3",4",6",8",10",12"	1/16 BEND, STREET (SPIG x H)
P327	1 1/2",2",2" x 1 1/2" x 1 1/2",3",4"	DOUBLE 1/4 BEND (H x H x H)
P331	1 1/2",2",3",4",6",8",10",12"	VENT ELL (H x H)
P333	1 1/2",2",3",4"	VENT ELL, STREET (H x SPIG)
P400	1 1/2",1 1/4",2",3",4",6",8",10",12"	SANITARY TEE (All Hub H)
P401	2" x 1 1/2" x 1 1/2",2" x 1 1/2" x 2",2" x 2" x 1 1/2",3" x 3" x 1 1/2",3" x 3" x 2",4" x 4" x 2",4" x 4" x 3"	SANITARY TEE, REDUCING (All HUB)
P428	1 1/2",2",3",4",6",8"	DOUBLE SANITARY TEE (All HUB)
P429	2" x 2" x 1 1/2" x 1 1/2",3" x 3" x 2" x 2",4" x 4" x 2" x 2",4" x 4" x 3" x 3",6" x 6" x 3" x 3",6" x 6" x 4" x 4",8" x 8" x 4" x 4"	DOUBLE SANITARY TEE, RED (All HUB)
P441	1 1/2",2",3",4",6",8",10",12"	VENT TEE (All HUB)

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P444X	1 1/2",2",3",4",6",8",10" x 8",12" x 8"	CLEAN OUT TEE W/PLUG (H x H)
P445	1 1/2",2",3",4",6",8",10",12"	FLUSH CLEANOUT TEE (H x H x FPT)
P445X	1 1/2",2",3",4"	FLUSH CLEANOUT TEE W/PLUG (H x H)
P500	2",2" x 1 1/2" x 1 1/2" x 1 1/2",2" x 2" x 1 1/2" x 1 1/2",3",3" x 2" x 3" x 3"	DOUBLE FIXTURE FITTING (ALL HUB)
P501	1 1/2",2",3",4"	COMBINATION WYE & 1/8 BEND (ALL HUB)
P502	2" x 2" x 1 1/2",3" x 3" x 1 1/2",3" x 3" x 2",4" x 4" x 2",4" x 4" x 3"	COMBINATION WYE & 1/8 BEND, REDUCING (ALL HUB)
P503	3",4",6",8"	COMBINATION WYE & 1/8 BEND (2-PIECE) (ALL HUB)
P504	XXXX	COMBINATION WYE & 1/8 BEND,REDUCING (2-PIECE) (ALL HUB)
P507	XXXX	DOUBLE COMBINATION WYE & 1/8 BEND (ALL HUB)
P600	1 1/2",2",3",4",6",8"	45 DEGREES WYE (ALL HUB)
P601	10" x 10" x 8",2" x 1 1/2" x 1 1/2",2" x 1 1/2" x 2",2" x 2" x 1 1/2"	45 DEGREES WYE, REDUCING (ALL HUB)
P611	1 1/2",2",3",4",6"	DOUBLE WYE (ALL HUB)
P612	2" x 2" x 1 1/2" x 1 1/2",3" x 3" x 1 1/2" x 1 1/2",3" x 3" x 2" x 2",4" x 4" x 2" x 2",4" x 4" x 3" x 3",6" x 6" x 4" x 4"	DOUBLE WYE, REDUCING (ALL HUB)
P700	1 1/2",2",3",4"	RETURN BEND (H x H)
P704P	1 1/2"	TAILPIECE ADAPTER W/NUT (SPIG x SLIP)
P705	XXXX	S-TRAP (H x H)
P705R	XXXX	RUNNING TRAP (H x H)
P706X	XXXX	P-TRAP (H x H)
P707X	XXXX	P-TRAP W/CLEANOUT (H x H)
P708P	XXXX	P-TRAP W/ UNION NUT (H x H)
P711P	1 1/2",1 1/2" x 1 1/4"	L.A. PATTERN P-TRAPW/UNION NUT (H x H)
P712	XXXX	JAR TRAP (SPIG x H)
P854	XXXX	FLANGE (SOCKET)
P096	XXXX	GROOVED COUPLING (ADAPTER) (Grooved Pipe x SOC.)
P097	XXXX	DURIRON TRANSITION FITTING, CAULK JOINT (SPIG x Male Caulk)
P098	XXXX	GLASS TRANSITION FITTING, MECHANICAL JOINT (SPIG x Glass Joint)
P404	2" x 1 1/2" x 1 1/2",2" x 1 1/2" x 2",2" x 2" x 1 1/2",3" x 3" x 1 1/2",3" x 3" x 2",4" x 4" x 1 1/2",4" x 4" x 1 1/2",4" x 4" x 3",4" x 4" x 3"	REDUCING SANITARY TEE, STREET (SPIG x H x H)
P720	XXXX	DRUM TRAP (H x H)

* XXXC = Different Size Code Designations.

TABLE 4 FROM IGC 210-2005A:

<u>Chemical Environment</u>	<u>72°F (23°C)</u>	<u>180°F (82°C)</u>
Acetic Acid	100% by volume	50% by volume
Acetone	30% by volume	20% by volume
Methyl Alcohol	100%	50% by volume
Ammonia Hydroxide	15% by weight	Do not test
Nitric Acid	70% by weight	30% by weight
Sodium Hydroxide	60% by weight	30% by weight
Sulfuric Acid	98% by weight	85% by weight
Hydrochloric Acid	36% by weight	36% by weight
Hydrogen Peroxide	50% by weight	50% by weight
Sodium Hypochlorite	15% by weight	

Note: Sodium Hypochlorite is unstable at elevated temperatures.