

## SUBMITTAL FOR ATLANTA PIPE cPVC FIRE SPRINKLER (WET) SYSTEM

### SCOPE

The products covered by this specification are intended for use with the distribution of pressurized liquids only, which are chemically compatible with the piping material. This specification covers chlorinated poly (vinyl chloride) (CPVC) pipe made in standard thermoplastic pipe dimension ratios and pressure rated for water. Included are criteria for classifying CPVC plastic pipe materials and CPVC plastic pipe, fire line, risers and requirements and test methods for materials, workmanship, dimensions, sustained pressure, burst pressure, flattening and extrusion quality. Methods of marking are also given. Chlorinated poly (vinyl chloride) plastic used to make pipe meeting the requirements of this specification are categorized by means of two criteria, namely, (1) short-term strength tests, and (2) long-term hydrostatic strength tests at both 73 and 180° F [23 and 82° C].

### SPECIFICATION

This specification covers CPVC pipe made from compounds meeting the requirements of Class 23447 as defined in Specification D 1784. The materials shall have an established HDS (Hydrostatic Design Stress) equal or greater than 2000 psi [13.80 MPa] at 73° F [23° C] and 500 psi [3.45 MPa] at 180° F [82° C] when evaluated in accordance with Test Method D 2837.

### INSTALLATION

Workmanship, finish and appearance of the pipe system shall be homogeneous throughout and free from visible cracks, holes and foreign inclusions, or other defects. The pipe shall uniform as commercially practicable in color, opacity, density, and other physical properties. Installation shall comply with the latest installation instructions published or with supervision by Atlanta Industries, Inc. and shall conform to all applicable plumbing and building code requirements. Buried pipe shall be installed in accordance with ASTM D 2321. Solvent cement joints shall conform to ASTM D 2564. The system shall be protected from chemical agents not compatible with cPVC compounds. The system shall be tested after installation through pressure test, depends on the pressure set by the contractor for 24 hours as much as possible.

**WARNING!** Never test with or transport/store compressed air or gas in cPVC pipe and fittings. Doing so can result in explosive failures and cause severe injury or death.

### REFERENCE STANDARD

<b>ASTM D F442/F442M-09</b>	:	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
<b>ASTM D 1784</b>	:	Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds



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**NOTE: Theoretical weight/s is based on a 3 meter pipe length.**

NOMINAL PIPE SIZE		OUTSIDE DIAMETER (OD)				WALL THICKNESS				THEORETICAL WEIGHT (kgs)	
		AVERAGE		TOLERANCE		MINIMUM		MAXIMUM			
<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>min</i>	<i>max</i>
1/2	15	0.840	21.300	±0.004	0.100	0.062	1.570	+0.020	0.530	0.680	0.880
3/4	20	1.050	26.700	±0.004	0.100	0.078	1.980	+0.020	0.530	1.070	1.320
1	25	1.315	33.400	±0.005	0.130	0.097	2.460	+0.020	0.530	1.670	1.980
1-1/4	32	1.660	42.200	±0.005	0.130	0.123	3.120	+0.020	0.530	2.670	3.070
1-1/2	40	1.900	48.200	±0.006	0.150	0.141	3.580	+0.020	0.530	3.500	3.950
2	50	2.375	60.300	±0.006	0.150	0.176	4.470	+0.021	0.551	5.470	6.060
2-1/2	65	2.875	73.000	±0.007	0.180	0.213	5.410	+0.026	0.686	8.010	8.900
3	80	3.500	88.900	±0.008	0.200	0.259	6.580	+0.031	0.821	11.870	13.170
4	100	4.500	114.300	±0.009	0.230	0.333	8.460	+0.040	1.060	19.620	21.770



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