

# SUBMITTAL FOR CHARLOTTE PIPE® FLOWGUARD GOLD® CPVC COPPER TUBE SIZE (CTS) HOT AND COLD DOMESTIC WATER DISTRIBUTION SYSTEM

Date: \_\_\_\_\_

Job Name: \_\_\_\_\_

Location: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

## ► Scope:

This specification covers Copper Tube Size (CTS) CPVC manufactured to standard dimensional ratio (SDR) 11 for hot and cold domestic water distribution. This system is intended for pressure applications where the operating temperature will not exceed 180° F at 100 psi.

## ► Specification:

Pipe shall be manufactured from virgin rigid CPVC (chlorinated polyvinyl chloride) vinyl compounds with a cell class of 24448 as identified in ASTM D 1784. Fittings shall be manufactured from virgin rigid CPVC (chlorinated polyvinyl chloride) vinyl compounds with a cell class of 23447 as identified in ASTM D 1784.

FlowGuard Gold CTS CPVC pipe and fittings shall conform to ASTM D 2846. Pipe and fittings shall be manufactured as a system and be the product of one manufacturer. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to NSF International Standards 14 and 61.

## ► Installation:

Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all applicable plumbing, fire, and building code requirements. Buried pipe shall be installed in accordance with ASTM F 1668. Solvent cement joints shall be made using CPVC cement conforming to ASTM F 493. If a primer is required by local plumbing or building codes, then a primer conforming to ASTM F 656 should be used. The system shall be protected from chemical agents, fire-stopping materials, thread sealant, plasticized-vinyl products or other aggressive chemical agents not compatible with CPVC compounds. The system shall be hydrostatically tested after installation. **WARNING!** Never test with or transport/store compressed air or gas in CPVC pipe or fittings. Doing so can result in explosive failures and cause severe injury or death.

## ► Referenced Standards:

ASTM D 1784: Rigid Vinyl Compounds  
 ASTM D 2846: CPVC Plastic Hot and Cold Water Distribution System  
 ASTM F 493: Solvent Cements for CPVC Pipe and Fittings  
 ASTM F 1668: Procedures for Buried Plastic Pipe  
 NSF Standard 14: Plastic Piping Components & Related Materials  
 NSF Standard 61: Drinking Water System Components—Health Effects



 Quarter Bend			 Eighth Bend			 Brass Male Adapter		
 Street Quarter Bend			 Male Adapter			 Bushing		
 Cap			 Tee			 Coupling		

*Not all fitting patterns shown*

**MINIMUM DIMENSIONS FROM CENTER TO END OF SOCKET  
(LAYING LENGTH) FOR CPVC 41, SDR 11 FITTINGS**

NOMINAL SIZE (IN.)	"G" MINIMUM IN. (mm)	"J" MINIMUM IN. (mm)	"N" MINIMUM IN. (mm)
1/2	0.382 (9.70)	0.183 (4.65)	0.102 (2.59)
3/4	0.507 (12.88)	0.235 (5.97)	0.102 (2.59)
1	0.633 (16.08)	0.287 (7.29)	0.102 (2.59)
1 1/4	0.758 (19.25)	0.339 (8.61)	0.102 (2.59)
1 1/2	0.884 (22.45)	0.391 (9.93)	0.102 (2.59)
2	1.134 (28.83)	0.495 (12.57)	0.102 (2.59)

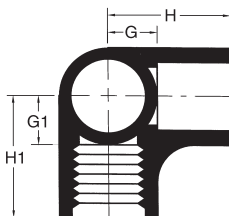
**PIPE REFERENCE GUIDE**

Product	Sizes Available					
	1/2	3/4	1	1 1/4	1 1/2	2
FlowGuard Gold® CPVC CTS SDR 11	•	•	•	•	•	•

## Side Outlet Elbow

S x S x FPT

PVC PART NO. 2520

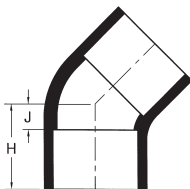


Size	Universal Part Number	H	G	H1	G1	Approx. Wt. (Lbs.)
$\frac{3}{4}$ X $\frac{3}{4}$ X $\frac{1}{2}$	414-101	$1\frac{9}{16}$	$\frac{9}{16}$	$1\frac{1}{2}$	$\frac{3}{4}$	0.112
$\frac{3}{4}$ X $\frac{3}{4}$ X $\frac{3}{4}$	414-007	$1\frac{9}{16}$	$\frac{9}{16}$	$1\frac{15}{32}$	$\frac{21}{32}$	0.096

## 45 Degree Elbow

S x S

PVC PART NO. 2309



Size	Universal Part Number	H	J	Approx. Wt. (Lbs.)
$\frac{1}{2}$	417-005	$1\frac{1}{16}$	$\frac{5}{16}$	0.040
$\frac{3}{4}$	417-007	$1\frac{1}{16}$	$\frac{11}{32}$	0.047
1	417-010	$1\frac{7}{16}$	$\frac{5}{16}$	0.120
$1\frac{1}{4}$	417-012	$1\frac{3}{4}$	$\frac{1}{2}$	0.176
$1\frac{1}{2}$	417-015	$1\frac{29}{32}$	$\frac{19}{32}$	0.216
2	417-020	$1\frac{31}{32}$	$\frac{21}{32}$	0.338
$2\frac{1}{2}$	417-025	$2\frac{7}{16}$	$1\frac{1}{16}$	0.556
3	417-030	$2\frac{27}{32}$	$\frac{27}{32}$	0.835
4	417-040	$3\frac{3}{32}$	$1\frac{1}{32}$	1.296
6	417-060	$5\frac{1}{8}$	$1\frac{5}{8}$	3.878
8	417-080	$6\frac{3}{4}$	$2\frac{1}{4}$	7.912