

## Chemical Injection Line 2205 UNS S31803

Designation		Wall Thickness		Mass per Unit Length	Calculated Inside Diameter	Tubing Area (Sq.in)		Tube Load Body		Internal Pressure (psi)		Collapse Strength	Internal Capacity per 1000ft		Torsional Yield	
		Specified	Min			W/min.	Internal min.	Yield min	Tensile min	Hydro Test 90%	Internal Yield min.					
		OD	WT	inch	inch							lb/ft	inch	inch <sup>2</sup>	inch <sup>2</sup>	lb
1/4	0.250	0.035	0.035	0.032	0.08	0.180	0.022	0.027	1,900	2,200	17,500	19,400	17,600	1.32	0.031	8
	0.250	0.049	0.049	0.044	0.11	0.152	0.029	0.021	2,500	2,900	23,600	26,200	23,300	0.94	0.022	10
	0.250	0.065	0.065	0.059	0.13	0.120	0.035	0.014	3,000	3,600	29,400	32,700	28,700	0.59	0.014	11
3/8	0.375	0.035	0.035	0.032	0.13	0.305	0.034	0.076	3,000	3,600	11,900	13,200	12,300	3.79	0.090	21
	0.375	0.049	0.049	0.044	0.17	0.277	0.046	0.065	4,000	4,800	16,500	18,300	16,700	3.13	0.075	26
	0.375	0.065	0.065	0.059	0.22	0.245	0.058	0.052	5,100	6,000	21,200	23,500	21,100	2.45	0.058	31
	0.375	0.080	0.080	0.072	0.26	0.215	0.069	0.042	5,900	7,000	25,200	28,000	24,800	1.88	0.045	34
1/2	0.500	0.049	0.049	0.044	0.24	0.402	0.063	0.133	5,600	6,600	12,500	13,900	12,900	6.59	0.157	51
	0.500	0.065	0.065	0.059	0.31	0.370	0.081	0.115	7,100	8,400	16,300	18,100	16,500	5.58	0.133	62
	0.500	0.080	0.080	0.072	0.36	0.340	0.097	0.100	8,400	10,000	19,700	21,900	19,700	4.71	0.112	70
5/8	0.625	0.049	0.049	0.044	0.30	0.527	0.080	0.226	7,100	8,400	10,100	11,200	10,100	11.32	0.270	84
	0.625	0.065	0.065	0.059	0.39	0.495	0.104	0.203	9,100	10,900	13,100	14,600	13,600	9.99	0.238	104

### Chemistry Composition

C,% 0.03 max Mn,% 2.00 max P,% 0.030 max S,% 0.020 max Si,% 1.00 max  
 Cr,% 21.0-23.0 Ni,% 4.50-6.50 Mo,% 2.50-3.50 N,% 0.08-0.20

### Mechanical Properties

Tensile Strength: 95,000psi (655MPa) min  
 Yield Strength: 80,000psi (552MPa) min  
 Hardness: 290HBW or 30HRC max

Tensile strength & yield strength minimum are calculated on specified wall.  
 Other dimensions are available on request.