

## Coiled Tubing 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			wpe	d	W/min.	Internal min.	Yield min	Tensile min					Hydro Test 90%
				OD	WT							inch	inch	lb/ft	inch	
3/4	0.750	0.080	0.080	0.076	0.57	0.590	0.161	0.281	13,500	16,000	14,000	15,600	14,400	14.19	0.34	190
	0.750	0.083	0.083	0.079	0.59	0.584	0.167	0.275	13,900	16,500	14,700	16,300	15,000	13.91	0.33	195
	0.750	0.087	0.087	0.083	0.62	0.576	0.174	0.268	14,500	17,200	15,400	17,100	15,700	13.53	0.32	202
	0.750	0.095	0.095	0.090	0.67	0.560	0.187	0.255	15,600	18,600	16,700	18,600	17,000	12.79	0.30	212
	0.750	0.102	0.102	0.097	0.71	0.546	0.199	0.243	16,600	19,700	18,100	20,100	18,300	12.16	0.29	223
1	1.000	0.075	0.075	0.071	0.74	0.850	0.207	0.578	17,400	20,700	10,100	11,200	10,100	29.46	0.70	346
	1.000	0.080	0.080	0.076	0.79	0.840	0.221	0.565	18,500	22,000	10,600	11,800	11,100	28.77	0.69	365
	1.000	0.083	0.083	0.079	0.81	0.834	0.229	0.557	19,100	22,700	11,200	12,400	11,600	28.36	0.68	376
	1.000	0.087	0.087	0.083	0.85	0.826	0.239	0.546	20,000	23,700	11,700	13,000	12,100	27.82	0.66	390
	1.000	0.095	0.095	0.090	0.92	0.810	0.257	0.528	21,600	25,700	12,800	14,200	13,200	26.75	0.64	414
	1.000	0.102	0.102	0.097	0.98	0.796	0.275	0.510	23,000	27,300	13,900	15,400	14,200	25.83	0.62	437
	1.000	0.109	0.109	0.104	1.04	0.782	0.293	0.493	24,400	29,000	14,400	16,000	14,700	24.93	0.59	458
	1.000	0.118	0.118	0.113	1.11	0.764	0.315	0.471	26,200	31,100	15,400	17,100	15,700	23.80	0.57	484
	1.000	0.125	0.125	0.118	1.17	0.750	0.327	0.458	27,500	32,600	16,500	18,300	16,700	22.93	0.55	498
	1.000	0.134	0.134	0.127	1.24	0.732	0.348	0.437	29,200	34,600	17,500	19,400	17,600	21.85	0.52	522
1-1/4	1.250	0.075	0.075	0.071	0.94	1.100	0.263	0.964	22,100	26,300	8,100	9,000	6,600	49.34	1.18	565
	1.250	0.080	0.080	0.076	1.00	1.090	0.280	0.947	23,500	27,900	8,600	9,500	7,400	48.44	1.15	597
	1.250	0.087	0.087	0.083	1.08	1.076	0.304	0.923	25,400	30,200	9,500	10,500	8,900	47.21	1.12	641
	1.250	0.095	0.095	0.090	1.17	1.060	0.328	0.899	27,600	32,700	10,300	11,400	10,700	45.81	1.09	684
	1.250	0.102	0.102	0.097	1.25	1.046	0.351	0.876	29,400	34,900	11,200	12,400	11,600	44.61	1.06	724
	1.250	0.109	0.109	0.104	1.33	1.032	0.374	0.853	31,300	37,100	11,600	12,900	12,000	43.42	1.03	763
	1.250	0.118	0.118	0.113	1.42	1.014	0.404	0.824	33,600	39,900	12,400	13,800	12,800	41.92	1.00	811
	1.250	0.125	0.125	0.118	1.50	1.000	0.420	0.808	35,300	42,000	13,300	14,800	13,700	40.77	0.97	837
	1.250	0.134	0.134	0.127	1.59	0.982	0.448	0.779	37,600	44,600	14,100	15,700	14,500	39.32	0.94	881
	1.250	0.145	0.145	0.138	1.71	0.960	0.482	0.745	40,300	47,800	15,400	17,100	15,700	37.58	0.90	932
1.250	0.156	0.156	0.148	1.82	0.938	0.512	0.715	42,900	50,900	16,700	18,500	16,800	35.87	0.85	975	

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		Specified	Min			wpe	d	W/min.	Internal min.	Yield min	Tensile min					Hydro Test 90%
				OD	WT							inch	inch	lb/ft	inch	
1-1/4	1.250	0.175	0.175	0.167	2.00	0.900	0.568	0.659	47,300	56,100	18,200	20,200	18,400	33.03	0.79	1050
1-1/2	1.500	0.087	0.087	0.083	1.31	1.326	0.369	1.398	30,900	36,700	7,900	8,800	6,200	71.69	1.71	955
	1.500	0.095	0.095	0.090	1.42	1.310	0.399	1.368	33,500	39,800	8,600	9,600	7,500	69.97	1.67	1021
	1.500	0.102	0.102	0.097	1.52	1.296	0.428	1.340	35,800	42,600	9,400	10,400	8,800	68.48	1.63	1085
	1.500	0.109	0.109	0.104	1.62	1.282	0.456	1.311	38,100	45,300	9,700	10,800	9,500	67.01	1.60	1147
	1.500	0.118	0.118	0.113	1.74	1.264	0.492	1.275	41,000	48,700	10,400	11,600	10,900	65.14	1.55	1223
	1.500	0.125	0.125	0.118	1.83	1.250	0.512	1.255	43,200	51,300	11,200	12,400	11,600	63.71	1.52	1264
	1.500	0.134	0.134	0.127	1.95	1.232	0.548	1.219	46,000	54,600	11,900	13,200	12,300	61.89	1.47	1336
	1.500	0.145	0.145	0.138	2.09	1.210	0.590	1.177	49,400	58,600	13,000	14,400	13,400	59.70	1.42	1420
	1.500	0.156	0.156	0.148	2.23	1.188	0.629	1.139	52,700	62,600	14,000	15,600	14,400	57.55	1.37	1492
	1.500	0.175	0.175	0.167	2.47	1.150	0.699	1.068	58,300	69,200	15,400	17,100	15,700	53.92	1.28	1619
	1.500	0.188	0.188	0.180	2.63	1.124	0.746	1.021	62,000	73,600	16,500	18,300	16,700	51.51	1.23	1700
1-3/4	1.750	0.095	0.095	0.090	1.68	1.560	0.469	1.936	39,500	46,900	7,400	8,200	5,400	99.23	2.36	1426
	1.750	0.102	0.102	0.097	1.79	1.546	0.504	1.902	42,200	50,200	8,000	8,900	6,500	97.45	2.32	1519
	1.750	0.109	0.109	0.104	1.91	1.532	0.538	1.867	45,000	53,400	8,400	9,300	7,100	95.70	2.28	1609
	1.750	0.118	0.118	0.113	2.05	1.514	0.581	1.824	48,400	57,500	9,000	10,000	8,200	93.46	2.23	1721
	1.750	0.125	0.125	0.118	2.16	1.500	0.605	1.800	51,100	60,600	9,600	10,700	9,300	91.74	2.19	1781
	1.750	0.134	0.134	0.127	2.31	1.482	0.648	1.758	54,400	64,600	10,300	11,400	10,700	89.55	2.13	1887
	1.750	0.145	0.145	0.138	2.48	1.460	0.699	1.706	58,500	69,500	11,200	12,400	11,600	86.91	2.07	2012
	1.750	0.156	0.156	0.148	2.65	1.438	0.745	1.660	62,500	74,200	12,100	13,400	12,500	84.31	2.01	2120
	1.750	0.175	0.175	0.167	2.93	1.400	0.831	1.575	69,300	82,300	13,300	14,800	13,700	79.92	1.90	2314
	1.750	0.188	0.188	0.180	3.13	1.374	0.888	1.517	73,800	87,600	14,200	15,800	14,600	76.97	1.83	2438
	1.750	0.204	0.204	0.194	3.36	1.342	0.948	1.457	79,300	94,100	15,400	17,100	15,700	73.43	1.75	2564
	1.750	0.224	0.224	0.214	3.64	1.302	1.033	1.373	85,900	102,000	16,800	18,700	17,100	69.12	1.65	2731
1.750	0.250	0.250	0.240	3.99	1.250	1.139	1.267	94,200	111,900	18,800	20,900	18,900	63.71	1.52	2927	

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		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	lb	psig	psig	psig	gal	bar
2	2.000	0.109	0.109	0.104	2.20	1.782	0.619	2.522	51,800	61,500	7,300	8,100	5,300	129.48	3.08	2149
	2.000	0.118	0.118	0.113	2.36	1.764	0.670	2.472	55,800	66,300	7,900	8,800	6,200	126.87	3.02	2303
	2.000	0.125	0.125	0.118	2.50	1.750	0.698	2.444	58,900	69,900	8,500	9,400	7,200	124.87	2.97	2387
	2.000	0.134	0.134	0.127	2.66	1.732	0.747	2.394	62,800	74,600	9,000	10,000	8,200	122.31	2.91	2534
	2.000	0.145	0.145	0.138	2.86	1.710	0.807	2.334	67,600	80,300	9,800	10,900	9,600	119.23	2.84	2708
	2.000	0.156	0.156	0.148	3.06	1.688	0.861	2.280	72,300	85,900	10,600	11,800	11,100	116.18	2.77	2860
	2.000	0.175	0.175	0.167	3.40	1.650	0.962	2.180	80,300	95,300	11,700	13,000	12,100	111.01	2.64	3135
	2.000	0.188	0.188	0.180	3.62	1.624	1.029	2.112	85,600	101,700	12,500	13,900	12,900	107.53	2.56	3312
	2.000	0.204	0.204	0.194	3.90	1.592	1.101	2.041	92,100	109,300	13,600	15,100	13,900	103.34	2.46	3494
	2.000	0.224	0.224	0.214	4.23	1.552	1.201	1.941	100,000	118,700	14,900	16,500	15,200	98.21	2.34	3738
	2.000	0.250	0.250	0.240	4.65	1.500	1.327	1.815	110,000	130,600	16,700	18,500	16,900	91.74	2.19	4029
	2.000	0.276	0.276	0.266	5.06	1.448	1.449	1.693	119,600	142,000	17,900	19,900	18,100	85.49	2.04	4291
2.000	0.281	0.281	0.271	5.14	1.438	1.472	1.670	121,400	144,200	18,200	20,200	18,300	84.31	2.01	4338	
2-3/8	2.375	0.109	0.109	0.104	2.63	2.157	0.742	3.688	62,100	73,700	6,200	6,900	3,400	189.70	4.52	3107
	2.375	0.118	0.118	0.113	2.83	2.139	0.803	3.627	66,900	79,500	6,700	7,400	4,100	186.55	4.44	3337
	2.375	0.125	0.125	0.118	2.99	2.125	0.837	3.593	70,700	83,900	7,100	7,900	4,900	184.12	4.39	3463
	2.375	0.134	0.134	0.127	3.20	2.107	0.897	3.533	75,500	89,600	7,600	8,400	5,800	181.01	4.31	3684
	2.375	0.145	0.145	0.138	3.44	2.085	0.970	3.460	81,300	96,500	8,300	9,200	7,000	177.25	4.22	3947
	2.375	0.156	0.156	0.148	3.68	2.063	1.035	3.395	87,000	103,300	9,000	10,000	8,200	173.53	4.13	4179
	2.375	0.175	0.175	0.167	4.10	2.025	1.158	3.272	96,800	114,900	9,900	11,000	9,800	167.20	3.98	4602
	2.375	0.188	0.188	0.180	4.37	1.999	1.241	3.189	103,300	122,700	10,600	11,800	11,000	162.93	3.88	4878
	2.375	0.204	0.204	0.194	4.71	1.967	1.329	3.101	111,300	132,200	11,500	12,800	11,900	157.76	3.76	5164
	2.375	0.224	0.224	0.214	5.12	1.927	1.453	2.977	121,100	143,800	12,700	14,100	13,100	151.40	3.61	5551
	2.375	0.250	0.250	0.240	5.65	1.875	1.610	2.820	133,500	158,600	14,200	15,800	14,600	143.34	3.42	6020
	2.375	0.276	0.276	0.266	6.16	1.823	1.762	2.668	145,600	172,900	15,300	17,000	15,600	135.50	3.23	6453
2.375	0.281	0.281	0.271	6.26	1.813	1.791	2.639	147,900	175,600	15,500	17,200	15,800	134.02	3.19	6532	

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		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	lb	psig	psig	psig	gal	bar
2-3/8	2.375	0.300	0.300	0.288	6.62	1.775	1.888	2.542	156,500	185,800	16,600	18,400	16,800	128.46	3.06	6791
2-5/8	2.625	0.145	0.145	0.138	3.83	2.335	1.078	4.334	90,400	107,300	7,600	8,400	5,600	222.31	5.30	4904
	2.625	0.156	0.156	0.148	4.10	2.313	1.152	4.260	96,800	115,000	8,100	9,000	6,700	218.14	5.20	5199
	2.625	0.175	0.175	0.167	4.56	2.275	1.290	4.122	107,800	128,000	9,000	10,000	8,200	211.03	5.03	5738
	2.625	0.188	0.188	0.180	4.87	2.249	1.383	4.029	115,100	136,700	9,600	10,700	9,300	206.23	4.91	6092
	2.625	0.204	0.204	0.194	5.25	2.217	1.482	3.930	124,100	147,400	10,400	11,600	10,900	200.40	4.77	6460
	2.625	0.224	0.224	0.214	5.72	2.177	1.621	3.791	135,200	160,500	11,400	12,700	11,900	193.24	4.60	6962
	2.625	0.250	0.250	0.240	6.31	2.125	1.798	3.614	149,200	177,200	12,900	14,300	13,300	184.12	4.39	7574
	2.625	0.276	0.276	0.266	6.89	2.073	1.971	3.441	162,900	193,500	14,000	15,500	14,300	175.22	4.17	8144
	2.625	0.281	0.281	0.271	7.00	2.063	2.004	3.408	165,500	196,600	14,100	15,700	14,500	173.53	4.13	8249
2-7/8	2.875	0.134	0.134	0.127	3.91	2.607	1.096	5.395	92,300	109,600	6,300	7,000	3,500	277.11	6.60	5554
	2.875	0.145	0.145	0.138	4.21	2.585	1.187	5.305	99,500	118,100	6,800	7,600	4,500	272.46	6.49	5965
	2.875	0.156	0.156	0.148	4.51	2.563	1.268	5.224	106,600	126,600	7,500	8,300	5,500	267.84	6.38	6330
	2.875	0.175	0.175	0.167	5.03	2.525	1.421	5.071	118,800	141,000	8,200	9,100	6,800	259.96	6.19	7000
	2.875	0.188	0.188	0.180	5.37	2.499	1.524	4.968	127,000	150,800	8,800	9,800	7,900	254.63	6.07	7442
	2.875	0.204	0.204	0.194	5.79	2.467	1.634	4.858	136,900	162,600	9,500	10,600	9,200	248.15	5.91	7902
	2.875	0.224	0.224	0.214	6.31	2.427	1.789	4.703	149,200	177,200	10,500	11,700	11,000	240.17	5.72	8534
	2.875	0.250	0.250	0.240	6.98	2.375	1.987	4.505	164,900	195,900	11,900	13,200	12,300	229.99	5.48	9310
	2.875	0.276	0.276	0.266	7.63	2.323	2.180	4.312	180,300	214,100	12,800	14,200	13,200	220.03	5.24	10037
	2.875	0.281	0.281	0.271	7.75	2.313	2.217	4.275	183,200	217,500	13,000	14,400	13,300	218.14	5.20	10171
3-1/4	3.250	0.145	0.145	0.138	4.79	2.960	1.349	6.947	113,200	134,400	6,100	6,800	3,300	357.24	8.51	7752
	3.250	0.156	0.156	0.148	5.13	2.938	1.442	6.853	121,300	144,100	6,600	7,300	4,000	351.95	8.39	8236
	3.250	0.175	0.175	0.167	5.72	2.900	1.617	6.678	135,200	160,600	7,300	8,100	5,200	342.90	8.17	9130
	3.250	0.188	0.188	0.180	6.12	2.874	1.736	6.560	144,700	171,800	7,800	8,700	6,100	336.78	8.02	9721

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		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	lb	psig	psig	psig	gal	bar	ft.lbs	
3-1/4	3.250	0.204	0.204	0.194	6.61	2.842	1.863	6.433	156,200	185,500	8,500	9,400	7,300	329.32	7.85	10341
	3.250	0.224	0.224	0.214	7.21	2.802	2.041	6.255	170,400	202,300	9,400	10,400	8,800	320.12	7.63	11195
	3.250	0.250	0.250	0.240	7.97	2.750	2.269	6.026	188,500	223,800	10,500	11,700	10,900	308.35	7.35	12252
	3.250	0.276	0.276	0.266	8.73	2.698	2.494	5.802	206,300	245,000	11,300	12,600	11,800	296.80	7.07	13251
	3.250	0.281	0.281	0.271	8.87	2.688	2.536	5.760	209,700	249,000	11,500	12,800	11,900	294.60	7.02	13437
	3.250	0.300	0.300	0.288	9.41	2.650	2.680	5.616	222,400	264,100	12,300	13,700	12,700	286.33	6.82	14053
3-1/2	3.500	0.156	0.156	0.148	5.55	3.188	1.559	8.063	131,100	155,700	6,100	6,800	3,400	414.39	9.87	9647
	3.500	0.175	0.175	0.167	6.19	3.150	1.749	7.872	146,200	173,700	6,800	7,500	4,300	404.57	9.64	10707
	3.500	0.188	0.188	0.180	6.62	3.124	1.877	7.744	156,500	185,800	7,300	8,100	5,100	397.92	9.48	11411
	3.500	0.204	0.204	0.194	7.15	3.092	2.015	7.606	169,000	200,700	7,900	8,800	6,200	389.81	9.29	12150
	3.500	0.224	0.224	0.214	7.80	3.052	2.209	7.412	184,400	219,000	8,600	9,600	7,600	379.79	9.05	13171
	3.500	0.250	0.250	0.240	8.64	3.000	2.458	7.163	204,200	242,500	9,800	10,900	9,600	366.96	8.74	14440
	3.500	0.276	0.276	0.266	9.46	2.948	2.703	6.919	223,600	265,600	10,500	11,700	11,000	354.35	8.44	15646
	3.500	0.281	0.281	0.271	9.62	2.938	2.749	6.872	227,300	270,000	10,700	11,900	11,200	351.95	8.39	15870
	3.500	0.300	0.300	0.288	10.21	2.900	2.906	6.715	241,300	286,500	11,500	12,800	11,900	342.90	8.17	16617

### 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.