

Stainless Steel

Super Duplex

(UNS S32760, EN 1.4501)

Application

Super Duplex stainless like S32760 is a carefully engineered mixed microstructure of austenite and ferrite (approximately 50/50) that offers superior strength and enhanced corrosion resistance compared to standard duplex grades. Compared with S32750, S32760 contains slightly higher chromium and molybdenum levels, and small additions of copper and tungsten, which improve high-temperature corrosion resistance and resistance to stress corrosion cracking in aggressive chloride-containing environments.

The balanced dual-phase microstructure ensures high mechanical performance while maintaining cost-effective corrosion resistance. Super Duplex S32760 combines the benefits of increased tensile and yield strength with reliable long-term durability, allowing for thinner material sections without compromising performance. This makes it particularly suitable for demanding applications in chemical processing, oil and gas, high-pressure vessels, and marine environments where both high strength and superior corrosion resistance are required.

Technical Data

Available tube product forms

STRAIGHT || **COILED** || **SEAMLESS**

Typical manufacturing specifications

ASTM A789, ASTM A790

Also individual customer specifications.

Industries predominantly using this grade

**Subsea control lines, Offshore platforms,
 Injection & Ballast water systems etc.**

Maximum Coil Length per Dimension (Unit : meter)

		Wall thickness (mm)					
		0.51	0.71	0.89	1.24	1.65	2.11
Outside diameter (mm)	3.175	-	-	-	-	-	-
	6.35	-	-	336	258	211	-
	9.53	-	-	212	159	126	104
	12.7	-	-	-	115	90	73
	19.05	-	-	-	74	57	46
	25.4	-	-	-	-	42	33

* We can provide longer length according to customer requirement

Chemical composition(% by weight)

Element	C	Mn	P	S	Si	Ni	Cr	Mo	N	Cu	W	-
Minimum	-	-	-	-	-	6.0	24.0	3.0	0.20	0.50	0.5	-
Maximum	0.05	1.00	0.030	0.010	1.00	8.0	26.0	4.0	0.30	1.00	-	-

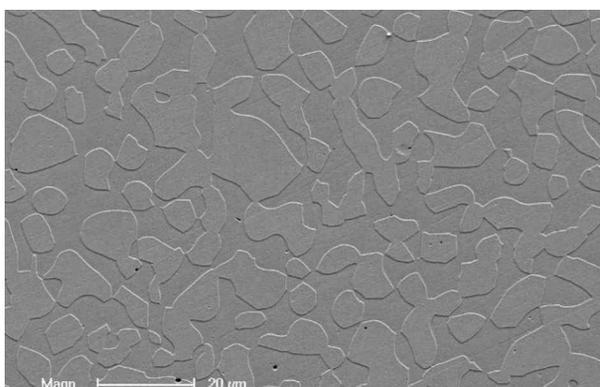
Mechanical Properties

	Specifications(Tubing, Annealed)		Actual data	
Tensile Rm	109	ksi (min.)	120~137	ksi
Tensile Rm	750	MPa (min.)	850~950	MPa
Yield (R.p. 0.2%)	80	ksi (min.)	90~101	ksi
Yield (R.p. 0.2%)	550	MPa (min.)	630~700	MPa
Elongation	25	% (min.)	30~35	%

Physical Properties(Room Temperature)

Specific Heat (0-100°C)	500	J.kg ⁻¹ .°K ⁻¹
Thermal Conductivity	12.8	W.m ⁻¹ .°K ⁻¹
Thermal Expansion	13	µm/m.°C
Modulus Elasticity	200	GPa
Electrical Resistivity	99	µohm.cm
Density	7.8	g/cm3

Microstructure



Maximum allowable pressure (Unit : BAR)

		Wall thickness (mm)						
		0.89	1.24	1.65	2.11	2.77	3.96	4.78
Outside diameter (mm)	6.35	748	1087	1489	-	-	-	-
	9.53	480	689	949	1249	-	-	-
	12.7	-	504	688	906	-	-	-
	19.05	-	328	443	578	779	-	-
	25.4	-	-	327	424	568	-	-
	31.8	-	-	259	334	446	656	-
	38.1	-	-	-	-	-	-	-
	50.8	-	-	-	-	-	-	-

* Please let us know your design pressure, we can produce requested tube size

* The table above is for your reference