

STAINLESS STEEL CHARACTERISTICS AND PROPERTIES

Grade: 304L 316L _____
 Seam: Welded Seamless WPWX
 Source: Import Domestic BAA AIS _____

Stainless Steel Characteristics									
Stainless Steel Grades	Chemical Composition Principal Elements %				Mechanical Properties Annealed Condition				Typical Characteristics
	CR	NI	C	Other Elements	Tensile PSI	Yield PSI	Elong. % IN 2"	Hardness Rockwell	
304	18.00-	8.00-11.00	0.08 max	-	85,000 105,000	35,000	55 / 20	B80 Ann	
304L	18.00-	8.00-13.00	0.035 max	-	80,000	30,000	55	B75	
304H	18.00-	8.00-11.00	0.04-0.10	-	85,000	35,000	55	B80	
310	24.00-	19.00-22.00	0.15 max	-	95,000	45,000	45	B85	
316	16.00-18.00	11.00-14.00	0.08 max	Mo 2.00- 3.00	85,000	35,000	50	B80	
316L	16.00-18.00	10.00-15.00	0.035 max	Mo 2.00- 3.00	75,000	30,000	50	B75	
316H	16.00-18.00	11.00-14.00	0.04-0.10	Mo 2.00- 3.00	85,000	35,000	50	B80	
317	18.00-20.00	11.00-14.00	0.08 max	Mo 2.00- 4.00	90,000	40,000	45	B85	
321	17.00-	9.00-13.00	0.08 max	Ti 5XC-0.60	90,000	35,000	55	B80	
347	17.00-20.00	9.00-13.00	0.08 max	Cb + Ta 10XC-1.00	95,000	40,000	50	B85	

Physical Properties (Annealed)								
Type	Density LBS/CU. INC.	Specific Elect. Resist OMHS CM/CM2	Specific Heat BTU/LB °F	Thermal Conduct BTU/HR SQ FT/ °F (212 °)	Mean Coefficient of Expansions °F		Tension PSI Modulus of Elasticity	Magnetic Permeability
					32-312	32-1200		
304/304L	0.29	72	0.12	9.4	9.6 x 10 ⁻⁶	10.4 x 10 ⁻⁶	28.0 x 10 ⁶	1.003
310	0.29	78	0.12	8.2	8.8 x 10 ⁻⁶	9.7 x 10 ⁻⁶	29.0 x 10 ⁶	1.003
316/316L	0.29	74	0.12	9.4	8.9 x 10 ⁻⁶	10.3 x 10 ⁻⁶	28.0 x 10 ⁶	1.003
317	0.29	74	0.12	9.4	8.9 x 10 ⁻⁶	10.3 x 10 ⁻⁶	28.0 x 10 ⁶	1.003
321	0.29	72	0.12	9.3	9.3 x 10 ⁻⁶	10.7 x 10 ⁻⁶	28.0 x 10 ⁶	1.003
347	0.29	73	0.12	9.3	9.3 x 10 ⁻⁶	10.6 x 10 ⁻⁶	28.0 x 10 ⁶	1.003
21-6-9	0.29	-	0.12	9.5	9.3 x 10 ⁻⁶	-	28.5 x 10 ⁶	1.002