

STAINLESS STEEL

ALLOYS 304/304L

(UNS S30400/S30403)

TUBING APPLICATIONS

Alloys 304/304L are one of the most common austenitic stainless steels. High nickel and chromium contents provide superior corrosion resistance, an ease of fabrication and excellent formability.

Alloys 304/304L are considered to be one of the most weldable of the high-alloy steels and can be welded by all fusion and resistance welding processes.

AVAILABLE TUBE PRODUCT FORMS

STRAIGHT
 COILED
 SEAMLESS
 SEAM WELDED AND COLD DRAWN
 SEAM WELDED, COLD DRAWN AND ANNEALED

TYPICAL MANUFACTURING SPECIFICATIONS

AMS 5566 ASTM A213
 AMS 5569 ASTM A269
 AMS 5647 ASTM A312
 AMS 6845 ASTM A632
 Mil-T 8504 Mil-T 8606

Also individual customer specifications.

TYPICAL APPLICATIONS

Piping
 Heat Exchangers
 Fasteners
 Food and beverage processing
 Environments that corrode standard carbon steel

INDUSTRIES PREDOMINANTLY USING THIS GRADE

NUCLEAR AND POWER
 GENERAL ENGINEERING

TECHNICAL DATA

MECHANICAL PROPERTIES

Temper	304		304L	
	ksi (min)	MPa (min)	ksi (min)	MPa (min)
Tensile Rm	76	517	70	485
R.p. 0.2% Yield	31	207	25	170
Elongation (2" or 4D gl)	40	% (min)	40	% (min)

PHYSICAL PROPERTIES (Room Temperature)

Property	304	304L
Specific Heat (0-100°C)	500	J.kg ⁻¹ .°K ⁻¹
Thermal Conductivity	16.2	W.m ⁻¹ .°K ⁻¹
Thermal Expansion	17.2	mm / m / °C
Modulus Elasticity	19.3	GPa
Electrical Resistivity	7.23	μohm / cm
Density	8.00	g / cm ³

CHEMICAL COMPOSITION (% by weight)

Element	304		304L	
	Min	Max	Min	Max
C	-	0.08	-	0.08
Mn	-	2	-	2
Ni	8	10.50	8	12.00
Cr	18	20	18	20
S	-	0.03	-	0.03
N	-	0.1	-	0.1
Si	-	0.75	-	0.75
P	-	0.045	-	0.045

Disclaimer: The information contained within this data sheet is for guidance only and is not intended for warranty of individual application - express or implied.