

STAINLESS STEEL

ALLOY 904L

(UNS N08904)

TUBING APPLICATIONS

Alloy 904L is a super austenitic stainless steel that is designed for moderate to high corrosion resistance in a wide range of process environments. It was originally developed to withstand environments containing dilute sulfuric acid.

Alloy 904L is non-magnetic in all conditions and has excellent formability and weldability. It performs better than other austenitic stainless steels because of the higher alloying of nickel and molybdenum.

AVAILABLE TUBE PRODUCT FORMS

STRAIGHT, COILED, SEAMLESS

TYPICAL MANUFACTURING SPECIFICATIONS

ASTM A213 ASTM A312
 ASTM A269 BS EN 10216 pt.5

Also individual customer specifications.

TYPICAL APPLICATIONS

Seawater Cooling Equipment
 Chemical Processing for Sulphuric, Phosphoric and Acetic Acids
 Gas Washing
 Condenser Tubes
 Heat Exchangers

INDUSTRIES PREDOMINANTLY USING THIS GRADE

CHEMICAL PROCESSES
 OIL AND GAS
 PHARMACEUTICAL

TECHNICAL DATA

MECHANICAL PROPERTIES

Temper	Annealed	
	Tensile Rm	71
Tensile Rm	490	MPa (min)
R.p. 0.2% Yield	32	ksi (min)
R.p. 0.2% Yield	220	MPa (min)
Elongation (2" or 4D gl)	35	% (min)

PHYSICAL PROPERTIES (Room Temperature)

Specific Heat (0-100°C)	450	J.kg ⁻¹ .°K ⁻¹
Thermal Conductivity	11.5	W.m ⁻¹ .°K ⁻¹
Thermal Expansion	15.8	mm / m / °C
Modulus Elasticity	190	GPa
Electrical Resistivity	9.52	μohm / cm
Density	7.95	g / cm ³

CHEMICAL COMPOSITION (% by weight)

Element	Min	Max
C	-	0.2
Mn	-	2
Ni	23	28
CR	19	23
S	-	0.3
Mo	4	5
N	-	0.1
Cu	1	2
P	-	0.03
Si	-	0.7

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

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