

AISI 904L

STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI 904L stainless steel is a non-stabilized austenitic stainless steel with low carbon content. This high alloy stainless steel is added with copper to improve its resistance to strong reducing acids, such as sulphuric acid. The steel is also resistant to stress corrosion cracking and crevice corrosion. AISI 904L is non-magnetic, and offers excellent formability, toughness and weldability. AISI 904L contains high amounts of expensive ingredients, such as molybdenum and nickel. Most of the applications that employ grade 904L are replaced by low-cost duplex stainless steel.

Chemical Properties

C	Mn	P	S	Si	Cr	Mo	Ni	Cu	N
0.020 Max	2.00 Max	0.040 Max	0.030 Max	1.00 Max	19.0-23.0	4.0-5.0	23.0-28.0	1.00-2.00	0.10 Max

Mechanical Properties

Yield strength	Tensile strength	Elongation
Min 0.2% Mpa	Min Mpa	Min %
215	490	35

Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal	Thermal Conductivity	Specific Heat	Electrical Resistivity
(Kg/m ³)	(Gpa)	Expansion(µm/m/°C)	(W/m.K)	0-100°C	(nΩ.m)
7.9	190	15	11.5	500	952

Heat Treatment

Solution Annealed @ 1050°C & Liquid Quenched @ 260°C

Equivalent Designation

UNS N08904
 Din X1NiCrMoCu25-20-5
 Werkstoff.No. 1.4539
 AFNOR X1NiCrMoCu25-20-5
 BS 904 S 13

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