

# AISI 348

# STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI 348 has low tantalum and cobalt and is employed in a variety of nuclear applications. AISI 348 may be welded by all commonly used fusion and resistance methods. Oxyacetylene welding is not recommended. It uses columbium/ tantalum as stabilizing elements to maximize its principal feature: resistance to intergranular corrosion. It can be used in applications requiring repeated heating in the range of 800 and 1650 F

## Chemical Properties

C	Mn	P	S	Si	Cr	Ni	Cb	Co	Ta
0.08 Max	2.00 Max	0.045 Max	0.030 Max	1.00 Max	17.0-20.0	9.0-13.0	1.10 Max	0.20 Max	0.10 Max

## Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction
Min 0.2% Mpa	Min Mpa	Min %	Min %
205	515	30	50

## Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electrical Resistivity
(Kg/m <sup>3</sup> )	(Gpa)	Expansion(μm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
7.96	193	16.6	18.9	20.5	16.3	21.4	500	126

## Heat Treatment

Solution Annealed @ 1040°C & Liquid Quenched @ 260°C

## Equivalent Designation

UNS S34800

Werkstoff No 1.4546

EN Number 10216-5

ISO 1127

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