

## M A T E R I A L   G R A D E   D A T A   S H E E T

# AISI 303

# STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI 303 represents the optimum in machinability among the austenitic stainless steels. Its machinability rating is approximately 78%, therefore it is called the automate of stainless steel. The sulphur (S) addition which is responsible for the improved machining characteristics of Grade 303, lowers its corrosion resistance to below that of Grade 304, lowers its forming capability and is especially not appropriate for reverse bendability. It has the same toughness as grade 304, despite the sulphur ingredient

### Chemical Properties

C	Mn	P	S	Si	Cr	Ni
0.15	2.00	0.20	0.15-0.35	1.00	17.0-19.0	8.0-10.0

### Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction	Hardness
Min 0.2% Mpa	Min Mpa	Min %	Min %	BHN
-	-	-	40	262

### Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electric Resistivity
(Kg/m <sup>3</sup> )	(Gpa)	Expansion(μm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
8027	193	17.3	17.8	18.4	16.3	21.5	500	720

### Heat Treatment

Heat to 1010-1120°C and cool rapidly. This grade cannot be hardened by thermal treatment.

### Equivalent Designation

UNS S30300

En Name X 8 CrNiS 18 9

Werkstoff.No. 1.4305

AFNOR Z 8 CNF 18 09

Jis SUS303

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