303 Austenitic Free machining stainless steel

Typical Analysis (Ave. values %)	C	Si	Mn	Cr	Ni	S	P
	0.08	0.50	1.80	17.3	8.3	0.25	0.025

NEAREST STANDARD	AS	DIN	SIS	AISI
	303	1.4305 X8CrNiS18-9	2346	303

DESCRIPTION	
	303 Austenitic stainless steel offers the best machinability for stainless steels. It is mainly used when production involves extensive machining in automatics. The improved machinability comes from the added Sulphur content which slightly reduces the toughness.

APPLICATIONS	
	Free-cutting steel for components subjected to corrosion in mechanical and plant engineering, mass produced items such as screws, bolts, and nuts.

MECHANICAL PROPERTIES ≤ 160 mm	Tensile Strength MPa	Yield Strength MPa	Elong %
	500-750	190	35

HEAT TREATMENT		
	Quench temperature (Annealing)	1000-1100 Water, air.

PHYSICAL PROPERTIES		
	Density (kg/dm^3)	7.90
	Modulus of elasticity 10^3 N/mm^2	200
	Thermal conductivity W/(m.K)	15
	Electric resistivity Ohm.mm^2/m	0.73
	Specific heat capacity J/(kg.K)	500
	Thermal expansion 10^6 m/(m.K)	16

WELDING	Not recommended, but if unavoidable use Bohler Welding Australia Avesta 308L

Round Drawn h9										
SIZE RANGE	7.94	9.53	12.7	15.88	19.05					
Round Peeled and Polished h10										
SIZE RANGE	31.75									

Sizes normally stocked in Australia. Some branches may not hold the entire range.
Other sizes available on request.