

Stainless steel Grades for CNC Machining

Materials	Other names	Type	Descriptions	Applications	Corrosion resistance	Post treatment capability	Welding capability	Price index	Density - g/cm3	Young modulus - Gpa	Yield strength - Mpa	Ultimate tensile strength - Mpa	Elongation at break - %	Hardness - HB brinell	Electrical Conductivity - % at 20 °C IACS	Electrical resistivity - Ω·mm2/m	Thermal conductivity - W/m-K
AISI 316Ti	1.4571	Stainless steel	Stainless steel 316Ti has the same composition as stainless steel 316, except with the addition of titanium. The presence of titanium improves its mechanical strength and wear resistance. Alternative to 316L, it has better high temperature strength.	Construction Chemical industry Food protecting Medical	Very good	Suitable for most of steel coating	Very good	2	8	200- 210	230	515	41	190	2,3	0,75	15
AISI 316L	1.4404	Stainless steel	It is a low carbon version of 316 stainless steel offering superior corrosion resistance (Most chemicals, salts, and acids).	Medical Aerospace Automotive Marine	Very good	Suitable for most of steel coating	Very good	3	8	190-205	170 - 190	485 - 530	40 - 42	190 - 217	2,3	0,74	14 - 15.9
AISI 304	1.4301	Stainless steel	This grade is the most versatile and widely used stainless steels with the addition of 18% chromium and 8% nickel. It has excellent mechanical properties and corrosion resistance.	Food processing Automotive Aerospace Chemical	Very good	Suitable for most of steel coating	Very good	2	8	290	230	580	43	170	2,4	0,73	16
AISI 301	1.4310	Stainless steel	This stainless steel known for its high strength and excellent corrosion resistance. It contains lower levels of chromium and nickel compared to other austenitic grades like 304, with the addition of higher carbon content. This composition allows 301 to be more responsive to heat treatment, enabling it to achieve high strength and hardness levels through cold working.	Automotive Structural	Very good	Suitable for most of steel coating	Good	2	8	200 - 212	200 - 230	510 - 590	35 - 46	200-220	2,4	0,73	16 - 16.3
AISI 420	1.4028	Stainless steel	It is a martensitic stainless steel grade. This type of steel is known for its high hardness capabilities. It is often used in applications requiring good wear resistance and a fair degree of corrosion resistance. The carbon content in Stainless steel 420 gives it its unique hardness properties. However, it is less resistant to corrosion compared to higher chromium stainless steels.	Medical Automotive	Moderate	Suitable for most of steel coating	Good	2	8	190 - 205	275-380	485-750	15 - 20	510-570	2,4	0,73	23 - 27
AISI 440C	1.4125	Stainless steel	This grade is a high-carbon martensitic stainless steel. It is known for its high strength, moderate corrosion resistance, and very good hardness and wear resistance. These properties are due to its high carbon content. 440C is magnetic and can be heat-treated to achieve highest hardness levels of stainless steel	Medical Automotive	Moderate	Suitable for most of steel coating	Good	3	8	204 - 215	340 - 43	560 - 800	14 - 18	550-620	2,4	0,73	22 - 24.2