

Product	Description	Properties
<u>Stainless Steel</u>		
301	301 is a non-magnetic stainless steel. It is known for its excellent corrosion resistance and high strength. The 301 also has the ability to be modified along with its properties. Due to its versatility, the 301 can be used for a variety of end applications	Excellent corrosion resistance, high strength, non-magnetic
302	302 is a chromium-nickel stainless steel alloy. It is a slightly higher carbon version of the 304. It is generally used in annealed condition, and known for being easily fabricated. Like the 304, it is easily formed into various shapes	Extremely tough, high ductility, high corrosion resistance, non-magnetic, hardenable by heat treating
303	303 is a chromium-nickel stainless steel. It represents great machinability and can be used in a variety of different applications. Stainless Steel 303 is non-hardenable by heat treatment	Resistant to mildly corrosive atmospheres, good resistance to oxidation up to 1700°F, excellent machinability
304	304 is one of the most common of the stainless steels. It contains chromium and nickel as the main alloying elements. The 304 can be found in many different end applications, mainly because it can be easily formed into various shapes	High strength, excellent corrosion resistance, excellent formability, non-magnetic, low conductivity
316	316 is one of the most common austenitic stainless steels. 316 contains a controlled amount of chromium, nickel, and molybdenum, which helps increase corrosion resistance. The high corrosion resistance makes the 316 a widely used steel in marine applications	Excellent corrosion resistance, good high temperature strength, non-magnetic, easy formability

347	347 is a chromium-nickel stainless steel that is stabilized by columbium and tantalum. It has a slightly better corrosion resistance than the 321. 347 is desired in situations that involve strongly oxidizing environments	Excellent corrosion resistance, good mechanical properties
410	410 is a general-purpose stainless steel. It is usually used for applications where mild corrosion, heat resistance, and high strength are expected to be encountered. 410 is an air hardening steel containing 12% chromium. It is heat resistant and has mechanical properties similar to the 4130.	Good corrosion resistance, high strength, high hardness, average cold working properties, limited weldability
416	416 is a martensitic chromium steel. It is one of the most common alloys to be heat treated. It can achieve the highest strength, hardness, and wear among all stainless steels	Good corrosion resistance, high strength, high hardness, great wear resistance, good oxidation resistance, excellent machinability
15-5	15-5 is a variant of the 17-4 stainless steel. It exhibits greater toughness and strength than the 17-4, which can be maintained up to 600°F.	Precipitation hardening, high strength, moderate corrosion resistance,
17-4	An age-hardening martensitic stainless steel. The 17-4 is a cost effective replacement for high strength carbon steels. It is also weldable relative to other conventional martensitic stainless steels	High tensile strength and hardness up to 600°F, excellent oxidation resistance, corrosion resistant, good creep rupture strength

17-7	17-7 is a precipitation hardened stainless steel alloy that possesses a combination of characteristics desirable for applications requiring high strength and corrosion resistance. The 17-7 contains chromium, nickel, and aluminum as its main alloying components	High strength, excellent fatigue properties, good formability, good corrosion resistance
13-8Mo	13-8Mo is a precipitation hardening stainless steel that is melted as VIM and VAR. The addition of Molybdenum improves the pitting resistance of the 13-8 relative to the 15-5 and 17-4.	Excellent strength, high hardness, improved toughness, good corrosion resistance
Nitronic 50 (22-13-5)	Nitronic 50 is a nitrogen-strengthened stainless steel that provides a combination of corrosion resistance and strength unmatched by other commercial metals at this price. Its corrosion resistance is superior to that of the 316 and 317. Moreover, the Nitronic 50 maintains its low magnetism when cold worked	High strength, high corrosion resistance, good mechanical properties at high and low temperatures, outstanding cryogenic properties
Nitronic 60	Nitronic 60 is a nitrogen-strengthened stainless steel known for its excellent galling resistance at high temperatures. Its main alloying elements are silicon and manganese, which help prevent wear, galling, and fretting. In terms of oxidation it is similar to the 309 grade, and in corrosion it lies between the 304 and the 316 grades	Excellent wear resistance, excellent galling resistance
316LVM	316 LVM is a low carbon, high nickel and molybdenum version of the 316 grade. It is known as a surgical steel that is ESR or VAR.	Great corrosion resistance, great cleanliness, non-magnetic, high surface finish, high fatigue strength

Custom 455	<p>Custom 455 is a martensitic age-hardenable stainless steel. It offers higher strength and hardness than the Custom 450 steel. It can be heat treated easily. Also, it resists staining in normal atmospheres and is not corroded in fresh water</p>	<p>High yield strength, good ductility, good toughness, good corrosion resistance, ease of fabrication, ease of heat treatment</p>
Custom 465	<p>Custom 465 is a premium, double vacuum-melted, martensitic age-hardenable stainless steel alloy that combines excellent strength, toughness, and corrosion resistance. It is popular in many industries due to its low life cycle cost</p>	<p>Good tensile strength, good fracture toughness, good fabricability, excellent resistance to corrosion cracking</p>
420 F	<p>420 F is a martensitic stainless steel alloy that is melted as AOD. It is a variation of the 420, with the addition of sulfur. This drastically improves the machinability of the 420F. It can be used in similar end applications than as the 420, but it performs better where good machining is a necessity</p>	<p>Hardenable, high strength, high hardness, high wear resistance, high machinability</p>
440 A	<p>The 440A is a AOD melted, high carbon martensitic stainless steel. It is developed to provide stainless properties, along with optimal hardness.</p>	<p>High corrosion resistance, high wear resistance, high hardness, magnetic</p>
440 C	<p>440C is the stainless steel in the 400 series family with the highest carbon content. The 440C is a martensitic stainless steel. The high carbon content in the 440C is responsible for its strength properties</p>	<p>High hardness, high strength, good corrosion resistance, high heat resistance, great machinability</p>

Specs	Markets	Applications
AISI 301, ASTM A167, ASTM A177, ASTM A554, ASTM A666, DIN 1.4310, MIL-S-5059, UNS S30100	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Aircraft structural parts, trailer bodies, utensils, automotive trim, wheel covers, roof drainage products, conveyor belts, subway cars, appliances
UNS S30200, AMS 5516, ASTM A666, ASTM A240	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Stamping, wire forming, blenders, dishwashers, springs, screens, cables, sanitary applications
AMS 5640, ASTM A 262, ASTM A 314, ASTM A 484, ASTM A582, UNS S30300,	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Nuts, gears, shafts, bushings, electrical switchgear components
AMS 5513, ASTM A240, ASTM A666	Medical, Medical, Energy, Automotive & Transportation, Industrial, Defense	Bone fixation, orthopedic implants, chemical industry process equipment, kitchen equipment, , appliances, screws, coil material
AMS 5524, ASTM A240	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense,	Pharmaceutical equipment, valve trim, digesters, tanks, evaporators, furnace parts, vessel parts

AMS 5512, AMS 5646, ASTM A269, ASTM A276, ASTM A193,	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Oil refineries, hanger rods, fired heater tubes, rocket engine parts, aircraft collector rings, chemical production equipment
AMS 5611, AMS 5612, AMS 5613, ASTM A182, ASTM A276, ASTM A479	Aerospace, Energy, Automotive & Transportation, Industrial, Defense	Bolts, screws, nuts, petroleum fractioning structures, shafts, gas turbines, mine ladder rungs
UNS S41600, ASTM A314, ASTM A484, ASTM A582, ASTM A895, QQ-S-764B	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Gears, pumps, valves, cutlery, utensils, steam and gas turbine blades, electrical motors
AMS 5659, AMS 5862, ASME SA 564, ASME SA 693, ASME SA 705, ASTM A 564, ASTM A 693, ASTM A 698, ASTM A 705, ASTM-A564, BMS 7-240, UNS S15500	Aerospace, Energy, Medical, Automotive & Transportation, Industrial, Defense	Marine gas turbine compressor sections, hollow shafts, engine parts, paper mill equipment, aircraft components, gears, nuclear reactor components
AMS 5604, AMS 5643, AMS 5825, ASME SA564, ASME SA693, ASME SA705, ASTM A564, ASTM A 693, ASTM A705, ASTM F899	Aerospace, Medical, Energy, Automotive & Transportation, Industrial, Defense	Medical instrumentation, nuclear components, food processing equipment, fasteners, aerospace applications

AMS 5528, MIL-S-2503, ASTM A693, ASME SA693	Aerospace, Medical, Automotive & Transportation, Energy, Industrial, Defense	Spring, washers, power boilers, chemical processing equipment, heat exchangers, oil and petroleum refining equipment, food processing equipment
AMS 5629, AMS 5864, ASTM A564, ASME SA564, ASTM A705, ASTM F899	Aerospace, Medical, Automotive & Transportation, Energy, Industrial, Defense	Medical instrumentation, aircraft components, injection molding equipment, petrochemical and nuclear plant equipment
ASTM A193, ASTM A194, ASTM A276, ASTM A479, AMS 5764, AMS 5861, ASTM A240, ASTM A182, ASTM	Medical, Automotive & Transportation, Industrial, Defense	Chemical pumps, pressure vessel tanks, piping, fittings, oil field equipment, gate valves, seawater pumps
AMS 5848, ASME SA 193, ASME SA 479, ASTM A 193, ASTM A 193, ASTM A 276, ASTM A 479, UNS S21800	Medical, Automotive & Transportation, Industrial, Defense	Fasteners, pins, bushings, pump components, roller bearings, wear rails, automotive valves, marine shafts, roller prosthetics
ASTM F138	Medical	Permanent implants, suture wire, orthopedic cables, catheters, bone pins, machines parts, screws, surgical equipment

AMS 5617, ASTM A564, ASTM F899, UNS S45500	Aerospace, Medical, Industrial, Automotive & Transportation, Defense	Surgical instruments, orthopedic equipment, spinal equipment, dental equipment, drivers, distractors, shafts, rocket engine thrust, chambers, fasteners
AMS 5936, AMS 5617, ASTM A564, ASTM F899, ASTM A564	Aerospace, Medical, Energy, Industrial, Automotive & Transportation, Defense	Actuators, flap tracks, landing gear components, slat tracks, torque tubes, marine equipment, firearms
AMS 5620, ASTM A528, QQ-S-764, ASTM A895	Aerospace, Medical, Industrial, Automotive & Transportation	Cutlery, pump shafts, dental and surgical equipment, gears, pinions, cams, steel balls, hand tools
AMS 5631, AMS-QQ-S763, ASTM A276, ASTM F899, QQ-S-763	Aerospace, Medical, Industrial, Defense	Dental and surgical instruments, cutlery, cutting tools, blades
ASTM A314, ASTM A473, ASTM A493, ASTM A580, ASTM A756, AMS 5618, AMS 5630, AMS 5880 QQ-S-763,	Aerospace, Medical, Industrial, Defense, Automotive & Transportation	Rolling element bearings, valve seats, high quality knife blades, surgical equipment, chisels

Forms

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Coil, Profile, Extrusion

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