

## STAINLESS STEEL GRADES

TYPE	CHARACTERISTICS / DESCRIPTIONS
201	Less resistant to corrosion than 300 series. It does have higher yield strength. Some typical end uses include cooking utensils, kitchen equipment, hose clamps, and truck trailer structures.
301	Excellent corrosion resistance, high strength and ductility. Typical end uses include auto trim, springs, and flatware.
302	Resists oxidation, easy fabrication, easy to clean, high strength with low weight properties. Used for utensils, cookware, and stainless flatware.
304 304L	Serves a wide range of applications. Withstands ordinary rusting in architecture, is resistant to food processing environments, resists organic chemicals, dyestuffs, and a wide variety of inorganic chemicals.
305	Low work hardening, high strength to weight ratio, attractive finish, easy to fabricate and clean, excellent for free spinning and cold heading. Typical uses include spring clips and mechanical components.
308	Increased oxidation and corrosion resistance over Type 305, very ductile, excellent heat resistance, and very good weldability. Usages include pump parts, oven linings, furnace parts, and boiler baffles.
309	High temperature strength and easy to weld. Typical uses include fire box sheets, tube supports, oven linings, and furnace parts.
316 316L	Slightly more nickel content than Type 304 giving it better corrosion resistance especially in chloride environments which tend to cause pitting. Type 316L has superior intergranular corrosion resistance after welding or stress relieving. Easy to maintain, good pitting resistance, superior creep strength, and close tolerances. Typical uses include marine environment components, conveyors, and food processing equipment.
317	Great resistance to pitting with high tensile strengths. Typically usages include storage tanks, chemical processing tanks, and pharmaceutical vessels.
317L	Excellent corrosion resistance, high creep and tensile strength, high stress to rupture strength, and minimal metallic contamination. Usages include storage tanks, and processing tanks containing corrosive materials.
321	Immune to high temperatures, stabilized by Titanium, resists intergranular corrosion, and possesses high strength properties. Used for aircraft afterburners, exhaust manifolds, cabin heaters, flash boilers, firewalls, and stack liners.
326	Significant strength properties, good cold workability, ductile, and excellent corrosion resistance. Used for making fasteners.
332	Resists corrosion, resists oxidation at high temperatures, and superior creep stress rupture properties. Usages include boiler and pressure vessels, appliance heating elements, nuclear vessels, and utilized in the food, pulp, and petroleum industries.
334	Resists scaling, corrosion, and oxidation. Typically used in automotive emissions control systems and sheathing for electric heating elements.

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347	Immune to high temperatures, high strength, stabilized by Columbium and Tantalum. Uses include exhaust manifolds, flash boilers, stack liners, firewalls, pressure vessels and boiler casings.
404	Excellent formability and durability. Good deep drawing and ductility characteristics. Common uses include heat exchangers, deep draw parts, and automotive components such as radiator and gas caps.
405	Easily machined and formed possessing good ductility properties. Resists oxidation and corrosion. Typically found in vessel linings, refining equipment, heat exchanger tubing, and quenching racks.
409	Very low alloy content. Is used for highly stressed parts needing strength and corrosion resistance. Often found in fasteners, automotive exhausts and catalytic converters along with farm equipment, culverts, transformer cases, and structural supports.
410	Resistant to corrosion, heat, scaling, and oxidation. Easily welded with high impact strength. Commonly used in turbine blades, cutlery, kitchen utensils, fasteners, screens, bushings, and valve parts.
420	Very durable, excellent corrosion resistance, and hardenable to 500 BHN. Used for dental and surgical instruments, hospital equipment, gears, molds, dies, knife blades, valve parts, and bushings.
430	Lower alloy content than Type 304. Used for highly polished trim applications in mild atmospheres. Has good formability, ductility, and low work hardening. Is resistant to corrosion and oxidation. Possesses good thermal conductivity, attractive finish, and is excellent for drawing. Used in nitric acid and food processing. Other uses include heat exchangers, vaults, tubing, builder's hardware, kitchen trims, and appliance trims.
434	Easy maintenance, good deep drawing, excellent scaling resistance, good formability, ductility and a bright finish. Typical applications include automotive trim, plant machinery, tubing, refining equipment, and chemical vessels.
436	Resists scaling and corrosion. Good deep drawing and has a bright finish. Commonly used for stretch formed parts.
442	Resists scaling and corrosion. Used for furnace parts, stack dampers, heaters, and fittings.

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