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Table of Stainless Steel Products & Grade Selection

Austenitic Stainless Steel

As the most commonly used, Austenitic stainless steel is non-magnetic; and contains both chromium and nickel, which increases corrosion resistance and ease of fabrication.

[2D = Cold-Rolled Dull Finished; 2B = Cold-Rolled Bright Finished; BA = Bright Annealed]

Austenitic Product			Typical Component	Characteristics	Applications
Grade	Finished	Thick			
201	2D , 2B	0.3-3.0	16Cr 6Ni	High strength	Hose Clamps, Sinks
	BA	0.3-1.6	0.15C		
201L	2D , 2B	0.3-3.0	16Cr 6Ni	Good corrosion and sensitization resistance, high weldability	Safety Shoes , Industrial Strapping
	BA	0.3-1.6	0.03C		
202	2D , 2B	0.3-3.0	19Cr 6Ni	Good corrosion resistance and formability, high weldability, excellent cleanability	Home appliance, food tank, building and transportation industries
	BA	0.3-1.6			
204C	2D , 2B	0.3-3.0	18Cr 2Ni	Excellent corrosion and pitting resistance, high strength at high temperature by adding molybdenum	Food processing industry, boiler, heat exchanger
	BA	0.3-1.6	1Mo 0.10C		

Austenitic Product			Typical Component	Characteristics	Applications
Grade	Finished	Thick			
301	2D , 2B	0.3-3.0	16Cr 6Ni	High strength	Seat belt, spring
	BA	0.3-1.6	0.15C		
304	2D , 2B	0.3-3.0	18Cr 8Ni	Good corrosion resistance and formability, high weldability, excellent cleanability	Home appliance, food tank, building and transportation industries
	BA	0.3-1.6			
304L	2D , 2B	0.3-3.0	18Cr 8Ni	Good corrosion and sensitization resistance, high weldability	Tube, hollowware, home appliance
	BA	0.3-1.6	0.03C		
316	2D , 2B	0.3-3.0	16Cr 10Ni	Excellent corrosion and pitting resistance, high strength at high temperature by adding molybdenum	Food processing industry, boiler, heat exchanger
	BA	0.3-1.6	2Mo		
316L	2D , 2B	0.3-3.0	16Cr 10Ni	Excellent intergranular corrosion resistance, compared to Grade 316, with low carbon content	Chemical industry, truck tanks, hot water tank
	BA	0.3-1.6	2Mo 0.03C		
321	2D , 2B	0.3-3.0	17Cr 9Ni Ti	Increase intergranular corrosion resistance by adding titanium	Heat exchanger
	BA	0.3-1.6			
304J1	2D , 2B	0.3-3.0	15Cr 6Ni Cu	Excellent formability by adding copper	Suitable for deep drawing applications
	BA	0.3-1.6			

[C = Carbon, Cr = Chromium, Cu = Copper, Mo = Molybdenum, Nb = Niobium, Ni = Nickel, Ti = Titanium]

* Some grades are during the development process or under the testing process.

Ferritic Stainless Steel

This is a magnetic type of stainless steel, having low carbon content and containing chromium as a main element. With a slightly higher yield strength than Austenitic grades, Ferritic stainless steel finds greater use where there is a risk of stress-corrosion cracking. Furthermore, some ferritic grade content of Titanium or Niobium are call "stabilize grade" with improved weldability and corrosion resistance.

Ferritic products : Grades 409L, 430, 439, 441, 430M2, 445NF, 436L, 436J1L, and 430J1L, are available in 2D, 2B and BA surface finished..

[2D = Cold-Rolled Dull Finished; 2B = Cold-Rolled Bright Finished; BA = Bright Annealed]

Ferritic Products			Typical Component	Characteristics	Applications
Grade	Finished	Thick			
409L	2D , 2B	0.3-3.0	10.5Cr Ti	Good weldability and formability, high-temperature oxidation resistance	Exhaust pipe
	BA	0.3-1.6			
410L	2D , 2B	0.3-3.0	11Cr 0.03C	Good formability, bendability and high-temperature oxidation resistance	Automotive industry, boiler, industry machinery components
	BA	0.3-1.6			
430	2D , 2B	0.3-3.0	16Cr	Moderate formability, high corrosion resistance	Home appliance, washing machine
	BA	0.3-1.6			
439	2D , 2B	0.3-3.0	17Cr Ti	High corrosion resistance and high-temperature oxidation resistance	Exhaust pipe, hot water tank
	BA	0.3-1.6			
441	2D , 2B	0.3-3.0	18Cr TiNb	Good deep drawability, better resistance against roping, high thermal conductivity, low thermal expansion coefficient	Washing machine, sink, kitchenware, decorative panel
	BA	0.3-1.6			
444	2D , 2B	0.3-3.0	17Cr 2Mo	Great intergranular corrosion resistance and SCC resistance	Heat exchanger, Auto exhaust manifold
	BA	0.3-1.6			
430M2	2D , 2B	0.3-3.0	16Cr Nb	Good formability, corrosion resistance, and weldability with low carbon and nitrogen content	Home appliance, hard disk drive
	BA	0.3-1.6			
430RE	2D , 2B	0.3-3.0	16Tr Ci	Good formability and ridging resistance	Washing machine, sink, kitchenware
	BA	0.3-1.6			
445NF	2D , 2B	0.3-3.0	20Cr	High corrosion resistance and good weldability	Kitchenware, elevator
	BA	0.3-1.6	MoTiNb		
436L	2D , 2B	0.3-3.0	16Cr	Excellent corrosion resistance by adding Molybdenum, good weldability	Exhaust pipe, hot water system
	BA	0.3-1.6	MoTiNb		
436J1L	2D , 2B	0.3-3.0	17Cr MoTi	Excellent corrosion resistance and weldability; cost savings with lower molybdenum content, compared to Grade 436L	Automotive industry
	BA	0.3-1.6			
430J1L	2D , 2B	0.3-3.0	19Cr Nb Cu	Good corrosion resistance and formability; high-temperature oxidation resistance, compared to Grade 430, by adding copper and niobium	Exhaust pipe, home appliance
	BA	0.3-1.6			

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