



Material Chart General Reference



Material	Notes	Forged Steel (Flanges, Fittings & Valves)	Weld Fittings	Pipe	Cast (Valves, Strainers)	Stud	Nuts
Carbon Steel	(-20°F to 800°F)	A105	A234 Gr WPB	A106 Gr B API 5L Gr B PLS1 A53 Gr B	A216 Gr WCB	A193 Gr B7 (B7M for NACE)	A193 Gr 2H (2HM for NACE)
Low Temp Carbon Steel (Charpy Tested @ -50°F)	(-50°F to 800°F)	A350 Gr LF2	A420 Gr WPL6	A333 Gr 6	A352 Gr LCB	A320 Gr L7	A193 Gr 7
1-1/4Cr-1/2Mo Alloy	High Temp (-20°F to 1000°F)	A182 Gr F11	A234 Gr WP11	A335 Gr P11	A217 Gr WC6	A193 Gr B16	A193 Gr 2H
2-1/4Cr-1Mo Alloy		A182 Gr F22	A234 Gr WP22	A335 Gr P22	A217 Gr WC9		
5 Cr-1/2Mo Alloy		A182 Gr F5	A234 Gr WP5	A335 Gr P5	A217 Gr C5		
9 Cr-1Mo Alloy		A182 Gr F9	A234 Gr WP9	A335 Gr P9	A217 Gr C9		
9 Cr-1Mo-V Alloy		A182 Gr F91	A234 Gr WP91	A335 Gr P91	A217 Gr C91		
304 Stainless Steel (18Cr-8Ni)	Low Carbon	A182 Gr F304L	A403 Gr WP304L	A312 Gr TP304L	A351 CF3	A193 Gr B8	A194 Gr 8
	Dual Grade (meets Low carbon and standard spec.)	A182 Gr F304\L	A403 Gr WP304\L	A312 Gr TP304\L	A351 CF8\3		
	Standard	A182 Gr F304	A403 Gr WP304	A312 Gr TP304	A351 CF10		
	High Carbon/Temp	A182 Gr F304H	A403 Gr WP304H	A312 Gr TP304H			
316 Stainless Steel (16Cr-12Ni-2Mo)	Low Carbon	A182 Gr F316L	A403 Gr WP316L	A312 Gr TP316L	A351 CF3M	A193 Gr B8M	A194 Gr 8M
	Dual Grade (meets Low carbon and standard spec.)	A182 Gr F316\L	A403 Gr WP316\L	A312 Gr TP316\L	A351 CF8M\3M		
	Standard	A182 Gr F316	A403 Gr WP316	A312 Gr TP316	A351 CF8M		
	High Carbon/Temp	A182 Gr F316H	A403 Gr WP316H	A312 Gr TP316H			
321 Stainless Steel (18Cr-10Ni-Ti)	Titanium stabilized	A182 Gr F321	A403 Gr WP321	A312 Gr TP321		A193 Gr B8	A194 Gr 8
347 Stainless Steel (18Cr-10Ni-Cb)	Niobium stabilized	A182 Gr F347	A403 Gr WP347	A312 Gr TP347	A351 CF8C	A193 Gr B8	A194 Gr 8

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Material	Notes	Forged Steel (Flanges, Fittings & Valves)	Cast (Valves, Strainers)
17-4PH	Precipitating Hardness Stainless Steel	A564 Gr 630	A564 Gr 630
Alloy 400	AKA Monel™ 400 Nickel Copper Alloy	B564 N04400	A494 M35-1
Alloy K500	AKA Monel™ K500 Nickel Copper Alloy	N05500	
Alloy 600	AKA Inconel® 600 Nickel Superalloy	B564 N06600	A494 CY40
Alloy 625	AKA Inconel® 625 Nickel Superalloy	B564 N06625	A494 CW6MC
Alloy 800	AKA Inconel® 800 Nickel Iron Alloy	B564 N08810	
Alloy 825	AKA Inconel® 825 Nickel Iron Alloy	N08825	
Alloy B2	AKA Hastelloy® B2	B564 N10665	A494 N-12MV
Alloy C	AKA Hastelloy® C Nickel Superalloy		A494 CW12MW
Alloy C22	AKA Hastelloy® C22 Nickel Superalloy	B754 N06022	A494 CX2MW
Alloy C276	AKA Hastelloy® C276 Nickel Superalloy	B564 N10276	
22% Duplex	Duplex 2205	A182 F51	A890 4A CD3MN
25% Duplex	Super Duplex 2507	A182 F53	A890 6A CD3MWCuN
254 SMO	Super Austenitic	A182 F44	A351 CK3MCuN

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