

CROSS-REFERENCE OF ASTM MATERIAL SPECIFICATIONS COVERING CAST/FORGED VALVES, FITTINGS, FLANGES & PIPE

Material	Forgings	Castings	Butt Weld Fittings	Pipe
Carbon Steel				
Standard Service	ASTM A105/A105N	A216-WCB, WCC	A234-WPB	A106-Gr.B/API5LB
Low-Temp Service	A350-LF2	A352-LCB, LCC	A420-WPL6	A333-Gr.6
Carbon - 1/2 Moly Alloy Steel				
High-Temp Service	A182-F1	A217-WC1	A234-WP1	A335-Gr.P1/A691 CM-70
Low-Temp Service		A352-LC1		
1/2Cr-1/2Mo Alloy Steel	A182-F2			A691 CM-75
1Cr-1/2Mo Alloy Steel	A182-F12 CL2		A234-WP12 CL2	A335-Gr.P12
1-1/4Cr-1/2Mo Alloy Steel	A182-F11 CL2	A217-WC6	A234-WP11 CL2	A335-Gr.P11
2-1/4Cr-1/2Mo-Vd Alloy Steel	A182-F22 CL3	217-WC9	A234-WP22 CL3	A335-Gr.P22
5Cr-1/2Mo Alloy Steel	A182-F5		A234-WP5	A335-Gr.P5
5Cr-1/2Mo Alloy Steel	A182-F5a	A217-C5		
9Cr-1Mo Alloy Steel	A182-F9	A217-GR.C12	A234-WP9	A335-Gr.9
9Cr-1Mo Alloy Steel	A182-F91	A217-C12A		A335-Gr.91
Type 410 13Cr Alloy Stainless Steel	A182-F6	A351-CA15		A268
Type 304 Stainless Steel 18Cr-8Ni				
Standard	A182-F304	A351-Gr.CF8	A403-WP304	A312-TP304
Low Carbon	A182-F304L	A351-Gr.CF3, CF3A	A403-WP304L	A312-TP304L
High Temp Service	A182-F304H	A351-Gr.CF10	A403-WP304H	A312-TP304H
Type 310 Stainless Steel 25Cr-20Ni	A182-F310H	A351-CK20	A403-WP310	A312-TP310
Type 316 Stainless Steel 16Cr-12Ni-2Mo				
Standard	A182-F316	A351-Gr.CF8M	A403-WP316	A312-TP316
Low Carbon	A182-F316L	A351-Gr.CF3M	A403-WP316L	A312-TP316L
High Temp Service	A182-F316H	A351-Gr.CF10M	A403-WP316H	A312-TP316H
Type 317 Stainless Steel 18Cr-13Ni-3Mo				
Standard	A182-F317	A351-Gr.CG8M**	A403-WP317	A312-TP317
High Temp Service	A182-F317H	A351-Gr.CF8A		
Type 321 Stainless Steel 18Cr.-10Ni-Ti				
Standard	A182-F321		A403-WP321	A312-TP321
High Temp Service	A182-F321H		A403-WP321H	A312-TP321H
Type 347 Stainless Steel 18Cr-10Ni-Cb				
Standard	A182-F347	A351-Gr.CF8C	A403-WP347	A312-TP347
High Temp Service	A182-F347H	A351-Gr.CF8C	A403-WP347H	A312-TP347H
Type 348 Stainless Steel 18Cr-10Ni-Cb				
Standard	A182-F348		A403-WP348	A312-TP348
High Temp Service	A182-F348H		A403-WP348H	A312-TP348H
2-1/2 Nickel Alloy Steel				
Low Temp Service		A352-LC2		
3-1/2 Nickel Alloy Steel				
Low Temp Service	A350-LF3	A352-LC3	A420-WPL3	A333-Gr.3
20Cr-18Ni-6Mo Duplex Steel	A182-F44	A351-CK3MCuN	S31254	A312-UNS S31254
22Cr-5Ni-3Mo-N Duplex Steel	A182-F51	A351-CD3MN*/A890/A995 4A	S31803/S32205†	A789/A790-UNS31803
25Cr-7Ni-4Mo-N Duplex Steel	A182-F53	CD4MCu**/CE3MN*/A995 5A	S32750	A789/A790-UNS32750
24Cr-10Ni-4Mo-V Duplex Steel		A351-CE8MN		
		A351-CD4MCuN/1B		
25Cr-5Ni-2Mo-3Cu Duplex Steel		A995-CD3MWCuN/6A	S32760	A789/A790-UNS32760
25Cr-7.5Ni-3.5Mo-N-Cu-W Duplex Steel	A182-F55	SEE ABOVE (6A)		

† S31803 has been supplemented by S32205 (F60) which dual conforms to S31803 but has a higher minimum N, Mo, Ni and Cr which guarantees a better corrosion resistance.

* A351 CD3MN/CE3MN replaced by A995 4A/5A (A890 still in use).

** ASTM CG8M and CD4MCu no longer referenced 2009 ASTM addition of ASME B16.34.

Data provided on this chart is extracted from ASME B16.34 2009 and is for informational purposes only. Always consult current ASME or API official publications. These are a rough guide for estimating purposes only, subject to change.

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For technical references and ASTM/ASME cross reference information on stainless, duplex, chrome-moly and alloy steel used in valves & piping systems in the petrochemical and refining industries, go to the technical section of our website.

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Valve cast material equivalent R10 - AS