

CORROSION & HEAT RESISTING STAINLESS STEELS & TOOL STEELS



MONMET

Monmet helps our customers solve their problems with an unmatched expertise in alloy and process selection.

ALLOY	ASTM SPECIFICATION	CHEMICAL COMPOSITION (Maximum unless range specified)							MINIMUM MECHANICAL PROPERTIES				EQUIVALENT FOREIGN SPECS			CHARACTERISTICS & APPLICATIONS
		C %	Si %	Mn %	Ni %	Cr %	Mo %	Other %	TENSILE STRENGTH (ksi)	YIELD STRENGTH (ksi)	ELONGATION %	REDUCTION OF AREA %	BRITISH STANDARD	GERMAN STANDARD	USA WROUGHT AISI STD	
MARTENSITIC & PRECIPITATION HARDENING STAINLESS STEEL	A743 CA-15	0.15	1.50	1.00	1.00	11.5-14.0	0.50		90	65	18	30	410C21	1.4008 G-X6CRN15	403	Good resistance to organic chemicals & gases. Used for impeller rings & sleeves in acid mine environments & especially the petroleum industry.
	AS2: Type 415 CA-15F	0.15	1.50	1.25	0.50	11.5-14.0	0.50	5.0-15-0.35	90	65	8	15				This is a hardenable chromium stainless steel to which Sulfur has been added to improve the machinability. It is easily hardened by air or oil quenching followed by tempering to produce a wide range of mechanical properties.
	A743 CA-40	0.20-0.40	1.50	1.00	1.00	11.5-14.0	0.50		100	70	15	25	420C26	1.4027	420	Widely used in aqueous, oxidation & wear applications in mildly corrosive conditions. Application includes impeller sleeves, valve trim seats in boiler feed & acid mine waters.
	A743 CB-30	0.30	1.50	1.00	2.00	18.0-21.0			65	30						Poly ferritic stainless steel which does not respond to heat treatment. CB-30 is resistant to many acids, alkaline solutions and organic chemicals. Typical applications: furnace insulators and hangers, pump and valve parts.
	A743 CA-60PH	0.06	1.00	1.00	3.5-4.5	11.5-14.0	0.4-0.10		110	80	15	35	425C11	1.4313 G-X6CRN134		These alloys exhibit high strength and hardness, superior corrosion & cavitation resistance (>CA-15). Applications include high pressure impellers, turbine runners & rotors.
	A747 CB7CU-1	0.07	1.00	0.70	3.6-4.6	15.5-17.70		Cu 2.5-1.2 Cb 0.15-0.35	125-175	97-145	5	10				These castings may be used in services requiring corrosion resistance and high strength at temperatures up to 500 °F. They may be machined in solution annealed condition and subsequently precipitation hardened to desired high-strength mechanical properties with little danger of cracking and distortion.
FERRITIC AUSTENITIC DUPLEX STAINLESS STEEL	A747 CB7CU-2	0.07	1.00	0.70	4.5-5.5	14.0-15.50		Cu 1.5-1.2 Cb 0.15-0.35	125-175	97-145	5	10				Used in hardened condition where a combination of high wear and corrosion resistance is required. Hardness and wear resistance increase with increasing Carbon content while their shock resistance and ductility decrease. Sulfur addition (0.07-0.20% S) improves machinability.
	AMS 5282: 440 C	0.95-1.29	1.00	1.00	0.75	16.0-18.0	0.25-0.75									
	AB90-1A CD 49Cu	0.04	1.00	1.00	4.75-6.0	24.5-26.5	1.75-2.25	Cu 2.75-3.25	100	70	16					Duplex Stainless Steels offer a combination of enhanced mechanical properties and excellent corrosion resistance when properly balanced in composition and properly heat treated.
	AB90-1B CD 49CuLN	0.04	1.00	1.00	4.7-6.0	24.5-26.5	1.7-2.3	Cu 2.7-3.3 N 0.10-0.25	125	97	10					These alloys will develop a range of approximately 30 to 60% ferrite with the balance austenite.
	AB90-2A CD 39N	0.08	1.50	1.00	8.0-11.0	22.5-25.5	3.0-4.5	N 0.10-0.30	95	65	25					These steels also exhibit excellent cavitation resistance, wear resistance properties, & stress corrosion cracking properties in chloride containing environments such as valve & sea water.
	AB90-3A CD 39N	0.06	1.00	1.00	4.0-6.0	24.0-27.0	1.75-2.5	N 0.15-0.25	95	65	25					
AUSTENITIC NON-HARDENABLE STAINLESS STEEL	AB90-4A CD 39N	0.03	1.00	1.50	4.5-6.5	21.0-23.5	2.5-3.5	Cu 1.00 N 0.10-0.30	90	60	25					
	AB90-5A CD 39N	0.03	1.00	1.50	6.0-8.0	24.0-26.0	4.0-5.0	N 0.10-0.30	100	75	18					
	AB90-6A CD 39N/CuLN	0.03	1.00	1.00	6.5-8.5	24.0-26.0	3.0-4.0	Cu 0.5-1.0 W 0.5-1.0 N 0.2-0.3	100	65	25		G-X6CRN16CU LN N01 4058			
	A743 CF-5	0.03	2.00	1.50	8.0-12.0	17.0-21.0			70	30	35		304C32		304L	These steels have good resistance to strong oxidizing acids, salts & organic acids. These alloys are utilized extensively in valve bodies, paper mills, fiber screens & propellers.
	A743 CF-6	0.08	2.00	1.50	8.0-11.0	18.0-21.0			70	30	35		304C15	1.4308 G-X6CRN16	304	
	A743 CF-3C	0.08	2.00	1.50	9.0-12.00	18.0-21.0		CL80C	70	30	30		247C17	G-X7CRN1809	347	This is classified as a stabilized steel with superior resistance to intergranular corrosion in welded products, in fact greater than CF8.
HIGH ALLOY STAINLESS STEELS	A743 CF-3H	0.03	1.50	1.50	9.0-13.0	17.0-21.0	2.0-3.0		70	30	30		316C32		316L	The steel is used in health care, dairy, brewery & chemical plants for valves, pumps, casings & the handling of hot organic acids, fatty acids, sulfuric & mild concentration of inorganic acids. The low carbon grade prevents welding without the post-weld heat treatments and protect against intergranular corrosion.
	A743 CF-8H	0.08	2.00	1.50	9.0-12.00	18.0-21.0	2.0-3.0		70	30	30		316C16	1.4408 G-X80CRN16010	316	The higher molybdenum content extends the range of use in reducing acids or mixed acids (jetting). Applications are similar to C316L.
	A743 CG-3M	0.03	1.50	1.50	9.0-13.0	18.0-21.0	3.0-4.0		75	35	25				317L	
	A743 CG-8M	0.08	1.50	1.50	9.0-13.0	18.0-21.0	3.0-4.0		75	35	25		316C18	1.4448	317	
HIGH ALLOY STAINLESS STEELS	A743 CN-3M/CuLN	0.03	1.00	1.20	17.5-19.5	19.5-20.5	6.0-7.0	Cu 0.5-1.0 N 0.18-0.24	80	38	35					The high nickel and molybdenum content in these austenitic grades provides superior corrosion resistance to oxidizing acids. These steels are non-magnetic.
	A743 CN-7M	0.07	1.50	1.50	27.5-30.5	19.0-22.0	2.0-3.0	Cu 3.0-4.0	60	25	35		333C11	1.4500 G-X7NiCrMoCuLN		Properties exhibited are better than the standard CF8M.
	A743 CN-3M	0.03	1.00	2.00	21.0-27.0	20.0-22.0	4.5-5.5		63	25	30					Applications include pump casings, impellers, valves & mixer components.
	A743 CN-3M/N	0.03	1.00	2.00	22.5-25.5	20.0-22.0	6.0-7.0	Cu 7.0-3.25 N 0.18-0.26	80	28	35					

Monmet specializes in heat, wear & corrosion resistant stainless steels & tool steels.

Martensitic & Precipitation Hardening Stainless Steel
Ferritic Austenitic Duplex Stainless Steel
Austenitic Non-Hardenable Stainless Steel

High Alloy Stainless Steels
Tool Steel
Heat Resisting Stainless Steel