

PIÈCES DE FONDERIE EN ALLIAGE — DONNÉES TECHNIQUES

ALLIAGES À BASE DE NICKEL

Cette fiche technique couvre les alliages à base de nickel moulés (familles Inconel, Hastelloy, Monel et équivalents ASTM) destinés aux applications à haute température, aux milieux fortement corrosifs et aux services critiques dans les secteurs de l'énergie, du pétrole et de la pétrochimie.

Haute performance en température, en corrosion et en fatigue thermique.

Note : les tableaux techniques ci-après (compositions chimiques, propriétés mécaniques, équivalences de normes) sont présentés en anglais selon les conventions internationales ASTM, BS et DIN.

STEEL CASTINGS - TECHNICAL DATA

NICKEL BASE ALLOYS

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 %	HARDNESS (BHN)	BRITISH STANDARD	GERMAN STANDARD	
	A494: CZ-100	1.00	2.00	1.50	95.00 MIN			Cu 1.25 Fe 3.00	50	18	10	90-140			High resisiting to caustic soda & alkaline salts.
	A494: M-35-1	0.35	1.25	1.50	BAL.			Cu 26.0-33.0 Fe 3.50	65	25	25				Excellent resistance to organic acids, alkalis, salt-solutions & sea water. Order M-35-1 or M-30C when weldability is required.
	A494: M-35-2	0.35	2.00	1.50	BAL.			Cu 26.0-33.0 Fe 3.50	65	30	25				
	A494: M-30-H	0.30	2.70-3.70	1.50	BAL.			Cu 27.0-33.0 Fe 3.50	100	60	10	243-294			
	A494: M-25-S	0.25	3.50-4.50	1.50	BAL.			Cu 27.0-33.0 Fe 3.50 Cb 3.0							
NICKEL BASE CORROSION RESISTANT ALLOYS	A494: M-30C	0.30	2.00	1.50	60.00 MIN			Cu 26.0-33.0 Fe 3.5 Cb 3.0	65	32.5	25	125-180			
	A494: N-12MV	0.12	1.00	1.00	61.00 MIN	1.00	26.0-30.0	Fe 4.0-6.0 V 0.20-0.60	76	40	6	180-220			Excellent corrosion resistance to reducing acids (sulphonic, hydrochloric, chlorides) & reducing salrs. Applications include pumps, impellers, casings & diffusers.
	A494: N-7M	0.07	1.00	1.00	BAL.	1.00	30.0-33.0	Fe 3.0	76	40	20				This nickel base alloy has properties comparable to the wrought grade: Inconel 600. Resistant to reducing environments. It has excellent temperature strength and creep properties. Used in chemical process, heat treating, power and electronic equipment. Excellent resistance to oxidizing & mixed acids containing halogens & reducing salts. Applications also include pumps, impellers & casings.
	A494: CY-40	0.40	3.00	1.50	BAL.	14.0-17.0		Fe 11.0	70	28	30				
	A494: CW-12MW	0.12	1.00	1.00	48.00 MIN	15.5-17.5	16.0-18.0	Fe 4.5-7.5 W 3.75-5.25 V 0.20-0.40	72	40	4	220-280			
	A494: CW-6M	0.07	1.00	1.00	BAL.	17.0-20.0	17.0-20.0	Fe 3.0	72	40	25				
	A494: CW-2M	0.02	0.80	1.00	BAL.	15.0-17.5	15.0-17.5	Fe 2.0	72	40	20				
	A494: CW-6MC	0.06	1.00	1.00	BAL.	3.15-4.50	8.0-10.0	Fe 5.0	70	40	25				Very good resistance to corrosive environments and elevated-temperatures. Applications include structural members, containers, supports, hangers and spacers.
CHROMIUM NICKEL ALLOYS	A560: 50NI-CB	0.10	0.30	0.30	BAL.	47.0-52.0		Fe 1.0 Cb 1.4-1.7	80	50	5				
	A560: 50CR-50NI	0.10	0.30	0.30	BAL.	48.0-52.0		Fe 1.0 N 0.30	80	50	5				
	A560: 80CR-40NI	0.10	0.30	0.30	BAL.	58.0-62.0		Fe 1.0 N 0.30	110	85					

Monmet offer high nickel based alloys for special corrosion resistant applications.

Nickel Base Corrosion Resistant Alloys
Chromium Nickel Alloys