

CASTINGS

PETROCHEMICAL •
 HYDRAULIC •
 PAPER AND CELLULOSE •
 MINING •
 CHEMISTRY •
 FOOD INDUSTRIES •



Products

- PUMPS: casings, axles, stuffing boxes, impellers ...
- VALVES: bodies, bonnets, rings, disk, ball ...
- FILTERS: casings, bonnets, gears ...
- Shredders, wearing plates, impellers, pump components.
- Vibrating screens, furnace grill, accessories for dredging machine.
- Dosagers pistons, pump impellers.
- Agitator shovels, tube supports, fittings, carrying axles.

Some costumers

Arafertil, Braskem, Cameron, Canberra, Cerpraecis, Copebras, Copesul, Dow Química, Dresser, Du-Pont, Fibra, Flowserve, Fosfertil, Hiter, Hidráulica Industrial, Kvaerner, M.N.A., Masoneilan, Nestlé, Netzsch, Omel, Petrobras, Petroquímica União, Petroquisa, Profertil, Refinações de Milho Brasil, Rhodia, Rhodiaco, Ultrafertil, Vescom, Voith ...

CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES OF CASTING ALLOYS

USE	CASTING ALLOY		CHEMICAL COMPOSITIONS (%) (A)										MECHANICAL PROPERTIES (B)				SIMILAR ROLLED (C)		COMERCIAL NAME (D)
	DESIGNATION	ASTM	C	Mn	Si	P	S	Cr	Ni	Mo	Other Elements	LR (M Pa)	LE (M Pa)	A (%)	E (%)	DESIGNATION	DESIGNATION		
CORROSION AND ABRASION	CA-6N	A 743	0.06	0.05	1.00	0.02	0.02	10.5	6.0	-	-	965	930	15	50	-	-		
	CA-6NM	A 743	0.06	1.00	1.00	0.04	0.03	11.5	3.5	0.40	-	755	550	15	35	-	-		
	CA-15	A 217 A 743	0.15	1.00	1.50	0.04	0.04	11.5	1.00	0.50	-	620	450	18	30	AISI 410	-		
	CA-40	A 743	0.20	1.00	1.50	0.04	0.04	11.5	1.00	0.50	-	690	485	15	25	AISI 420	-		
	CA-40F	A 743	0.20	1.00	1.50	0.04	0.04	11.5	1.00	0.50	-	690	485	12	-	-	-		
	CB-30	A 743	0.30	1.00	1.50	0.04	0.04	18.0	2.00	-	Cu: 0.90-1.20 OPCIONAL	450	205	-	-	AISI 431 AISI 442	-		
	CB-7Cu-1	A 747	0.07	0.70	1.00	0.035	0.03	15.5	3.80	-	Cu: 2.50-3.20 Nb: 0.15-0.35 N: 0.05	860 1170	670 1000	10 5	-	17-4 PH	17-4 PH		
	CB-7Cu-2	A 747	0.07	0.70	1.00	0.035	0.03	14.0	4.50	-	Cu: 2.50-3.20 Nb: 0.15-0.35 N: 0.05	860 1170	670 1000	10 5	-	15-5 PH	15-5 PH		
	CC-50	A 743	0.50	1.00	1.50	0.04	0.04	26.0	4.00	-	-	380	-	-	-	AISI 446	-		
	CD-4MCu	A 351 A 743	0.04	1.00	1.00	0.04	0.04	24.5	4.75	1.75	Cu: 2.75 - 3.25	690	485	16	-	-	FERRALIUM		
CORROSION	CG-6MMN	A 743	0.06	4.00	1.00	0.04	0.03	20.5	11.5	1.5	Nb: 0.1-0.3 V: 0.1-0.3 N: 0.2-0.4	585	290	30	-	-	-		
	CG-3M	A 743	0.03	1.50	1.50	0.04	0.04	18.0	9.0	3.00	-	515	240	25	-	-	-		
	CK-3MCuN	A 743	0.025	1.20	1.00	0.045	0.01	19.5	17.5	6.00	Cu: 0.50-1.00 N: 0.18-0.24	550	260	35	-	-	-		
	CK-35MN	A 743	0.035	2.00	1.00	0.035	0.02	22.0	20.0	6.00	Cu: 0.40 N: 0.21-0.32	570	280	35	-	-	-		
	4A(J92205)	890/995	0.03	1.50	1.00	0.04	0.02	21.0	4.50	2.50	Cu: 1.00 N: 0.1-0.3	620	415	25	-	-	-		
	5A(J93404)	890/995	0.03	1.50	1.00	0.04	0.04	24.0	6.00	4.00	N: 0.1-0.3	690	515	18	-	-	-		
	6A(J93380)	890/995	0.30	1.00	1.00	0.03	0.025	24.0	8.50	3.00	Cu: 0.50-1.00 N: 0.20-0.30 W: 0.50-1.00	690	450	25	-	-	-		
	CF-3	A 351 A 743	0.30	1.50	2.00	0.04	0.04	17.0	8.00	-	-	485	205	35	-	AISI 304L	18/8 BAIXO C		
	CF-8	A 351 A 743	0.08	1.50	2.00	0.04	0.04	18.0	8.00	-	-	485	205	35	-	AISI 304	18/8		
	CF-20	A 743	0.20	1.50	2.00	0.04	0.04	18.0	8.00	-	-	485	205	30	-	AISI 302	-		
	CF-3M	A 351 A 743	0.30	1.50	1.50	0.04	0.04	17.0	9.00	2.00	-	485	205	30	-	AISI 316L	18/8/2 BAIXO C		
	CF-3MN	A 743	0.30	1.50	1.50	0.04	0.04	17.0	9.00	2.00	N: 0.10-0.20	515	255	35	-	-	-		
	CF-8M	A 351 A 743	0.08	1.50	2.00	0.04	0.04	18.0	9.00	2.00	-	485	205	30	-	AISI 316	18/8/2		
	CF-8C	A 351 A 743	0.08	1.50	2.00	0.04	0.04	18.0	9.00	2.00	Nb: 8 x %C -1.00	485	205	30	-	AISI 347	18/8 ESTABILIZADO		
	CF-10SMnN	A 743	0.10	7.00	3.50	0.04	0.04	16.0	8.00	-	N: 0.08-0.18	515	240	30	-	-	-		
	CF-16Fa	A 743	0.16	1.50	2.00	0.04	0.02	18.0	9.00	0.40	-	485	205	25	-	AISI 303	18/8 DE FACIL USINAGEM		
	CG-8M	A 351 A 743	0.08	1.50	1.50	0.04	0.04	18.0	9.00	3.00	-	520	240	25	-	AISI 317	-		
	CH-20	A 351 A 743	0.20	1.50	2.00	0.04	0.04	22.0	12.0	-	-	485	205	30	-	AISI 309	-		
	CK-20	A 351 A 743	0.20	2.00	2.00	0.04	0.04	23.0	19.0	-	-	450	195	30	-	AISI 310	-		
	CN-7M	A 351 A 743	0.07	1.50	1.50	0.04	0.04	19.0	27.5	2.00	Cu: 3.00-4.00	425	170	35	-	-	ALLOY-20		
CW-12M	A 743	0.12	1.00	1.50	0.04	0.03	15.5	BAL.	16.0	W: 5.25 / Co: 2.50 Fe: 0.40 / Fe: 7.50	495	315	4.0	-	-	HASTELLOY-C			
CW-6M	A 494	0.07	1.00	1.00	0.04	0.03	17.0	BAL.	17.0	Fe: 3.00	495	275	25	-	-	CHLORIMET 3			
CY-40	A 494 A 743	0.40	1.50	3.00	0.03	0.03	14.0	BAL.	-	Fe: 11.0	485	195	30	-	-	INCONEL			
CZ-100	A 494 A 743	1.00	1.50	2.00	0.03	0.03	-	95.0 MIN.	-	Cu: 1.25 Fe: 3.00	345	125	10	-	-	NIQUEL- FUNDIDO			
HIGH TEMPERATURE	N-12M	A 743	0.12	1.00	1.00	0.04	0.03	1.00	BAL.	26.0 33.0	Fe: 6.00 V: 0.60 / Co: 2.50	495	315	6	-	-	-		
	N-12MV	A 494	0.12	1.00	1.00	0.04	0.03	1.00	BAL.	26.0 30.0	Fe: 4.00-6.00 V: 0.20-0.60	525	275	6	-	-	HASTELLOY-B		
	N-7M	A 494	0.07	1.00	1.00	0.04	0.03	1.00	BAL.	30.0 33.0	Fe: 3.00	525	275	20	-	-	CHLORIMET 2		
	M-35-1	A 494 A 743	0.35	1.50	1.25	0.03	0.03	-	BAL.	-	Cu: 26.0-33.0 Fe: 3.50	450	170	25	-	-	MONEL		
	M-35-2	A 494 A 743	0.35	1.50	2.00	0.03	0.03	-	BAL.	-	Cu: 26.0-33.0 Fe: 3.50	450	205	25	-	-	MONEL		
	M-25S	A 494	0.25	1.50	3.50	0.03	0.03	-	BAL.	-	Cu: 27.0-33.0 Fe: 3.50	-	-	-	-	-	MONEL		
	M-30H	A 494	0.30	1.50	2.70	0.03	0.03	-	BAL.	-	Cu: 27.0-33.0 Fe: 3.50	690	415	10	-	-	MONEL		
	M-30C	A 494	0.30	1.50	2.00	0.03	0.03	-	BAL.	-	Cu: 26.0-33.0 Fe: 3.50 / Nb: 1.0-3.0	450	225	25	-	-	MONEL		
	HD	A 297	0.50	1.50	2.00	0.04	0.04	26.0	4.00	0.50	-	515	240	8	-	-	-		
	HE	A 297	0.20	2.00	2.00	0.04	0.04	26.0	8.00	0.50	-	585	-	-	-	-	-		
HF	A 297	0.20	2.00	2.00	0.04	0.04	26.0	8.00	0.50	-	485	-	-	-	AISI 302 B	-			
HH	A 297	0.20	2.00	2.00	0.04	0.04	24.0	11.0	0.50	-	515	-	-	-	AISI 309	-			
HI	A 297	0.20	2.00	2.00	0.04	0.04	26.0	14.0	0.50	-	485	-	-	-	-	-			
HK	A 297 A 351	0.20	2.00	2.00	0.04	0.04	24.0	18.0	0.50	-	450	-	-	-	AISI 310	-			
HL	A 297	0.20	2.00	2.00	0.04	0.04	28.0	18.0	0.50	-	450	-	-	-	-	-			
HN	A 297	0.20	2.00	2.00	0.04	0.04	19.0	23.0	0.50	-	435	-	-	-	-	-			
HP	A 297	0.35	2.00	2.50	0.04	0.04	24.0	33.0	0.50	-	430	-	-	-	-	-			
HP-40	-	0.30	1.50	1.00	0.03	0.03	23.0	33.0	-	Nb: 1.50	450	-	-	-	-	-			
CT-15C	A 351	0.15	1.50	1.50	0.03	0.03	19.0	31.0	0.50	Nb: 0.5-1.5 / N: 0.10 Cu: 0.1 / Al: 0.06	441	-	-	-	-	MANAURITE 900			
HT-30	A 351	0.25	2.00	2.50	0.04	0.04	13.0	33.0	0.50	-	450	-	-	-	-	-			
HT	A 297	0.25	2.00	2.50	0.04	0.04	15.0	33.0	0.50	-	450	-	-	-	-	-			
HU	A 297	0.25	2.00	2.50	0.04	0.04	17.0	37.0	0.50	-	450	-	-	-	-	-			
HW	A 297	0.25	2.00	2.50	0.04	0.04	10.0	58.0	0.50	-	415	-	-	-	-	-			
HX	A 297	0.25	2.00	2.50	0.04	0.04	15.0	64.0	0.50	-	415	-	-	-	-	-			
NON FERROUS	DESIGNATION	ASTM	Cu	Al	Fe	Mn	Ni+Co	Pb	Si	-	-	LR (M Pa)	LE (M Pa)	A (%)	E (%)	Comercial Name			
	955 (C95500)	B 148	78.0	10.0	3.0	3.0	3.5	3.5	-	-	620	275	6	-	-	BRONZE ALUMINUM			
	958 (C95800)	B 148	79.0	8.50	3.50	0.80	4.00	0.03	0.10	-	585	240	15	-	-	BRONZE ALUMINUM			

(A) Maximum percentage, except where the range is indicated.

(B) Minimum value, except where the range is indicated.

(C) The indicated equivalence is only orientative and corresponds to the rolled alloy, in which chemical composition is closest to the casting alloy, but with different mechanical characteristics.

(D) Commercial names are given only as references.

References: 1) HANDBOOK OF STAINLESS STEELS (D. Peckner & I.M. Bernstein)

2) METALSHANDBOOK - Vol. 3- Ninth Edition (ASM)

3) ANNUAL BOOK OF ASTM STANDARDS - Part 01-02 - 2005 (ASTM)