High Resistance Brasses

Commercial Ref.	Chemical composition Alloys re. specifications in force (values in percentages, minimum/maximum)											Most similar International standards
	Cu	Sn	Pb	Zn	Ni	P	Fe	Si	Co	Mn	Al	
B-255 2) 5)	60,0 67,0	0,1	0,2	Rest	3,0	0,05	1,5 4,0	0,1		2,5 5,0	3,0 7,0	ISO 1338 - CuZn25Al6Fe3Mn3 BS 1400 - HT B3 NFA 53-703-CuZn19Al6 C86300
B-342 2) 5)	55,0 66,0	0,3	0,3	Rest	3,0	0,05	0,5 2,5	0,1		0,3 4,0	1,0 3,0	ISO 1338 - CuZn34Al2Fe3Mn3 BS 1400 - HT B1 NFA 53-703-CuZn33Al4 C86700

Special Alloys

Commercial Ref.	Chemical composition Alloys re. specifications in force (values in percentages, minimum/maximum)											Most similar International standards
	Cu	Sn	Pb	Zn	Ni	P	Fe	Si	Co	Mn	Al	
B-102 5) 6)	84,5 87		0,05		9 11	0,05	1,0 1,8	0,1		1,5		C96200 GAMM MM12CuNi10Fe1Mn
B-134 5)	Rest	0,1	0,05	0,1			4,0 5,0			1,5 2,5	12,5 13,5	AMPCO 21W B-134 forjado, equivale a C62500-AMPCO 21
B-159	Rest	0,1	0,05		13,5 16,5		0,4 1,0		1,0 2,0	0,5	10,75 11,5	C99300 INCRAMET 800
B-033	89,0	1,0	0,5	5,0			2,5	1,0 5,0		1,5	1,5	C87200

High Resistance Brasses

Commercial Ref.	Denomination of materials and processes in accordance with standard			Approximate mechanical characteristics at 20°C (minimum values)					Properties	Applications
	Denomination	Material no.			Breaking load $R_{p0.2}$ N/mm²	Elongation A5 (%)	Hardness HB 10/1000	Elastic Modulus KN/mm²		
B-255 2) 5)	CuZn25Al5 DIN 1709	2.0598.01 2.0598.03 2.0598.02	G GC GZ GK	450 480 480	750 750 750	8 5 8	180 190 180	105 to 115	Material endowed with very high static load for works subjected to slow speeds.	Die-making
B-342 2) 5)	CuZn34Al2 DIN 1709	2.0596.01 2.0596.03 2.0596.02	G GC GZ GK	250 260 260	600 620 600	15 14 10	140 150 140	90 to 98	Material endowed with static load and high hardness. Not suitable for marine use.	Parts of valves, seats, cones, etc.

Special Alloys

Commercial Ref.	Denomination of materials and processes in accordance with standard			Approximate mechanical characteristics at 20°C (minimum values)					Properties	Applications
	Denomination	Material no.	Process	Elastic limit $R_{p0.2}$ N/mm²	Breaking load $R_{p0.2}$ N/mm²	Elongation A5 (%)	Hardness HB 10/1000	Elastic Modulus KN/mm²		
B-102 5) 6)	ASTM	C96200	B505 B369	310 310	500 550	20 20	65 65	135	High corrosion-proofing in sea water. Very weldable.	Construction of high-pressure piping.
B-134 5)	ASTM ASTM	 unedited C62500		380 414	600 690 758	1 1	270 285	110	Very high mechanical characteristics. Particularly shock-resistant.	Stainless steel deep stamping moulds.
B-159	ASTM	C99300	unedited	627 to 675		4	200	126	Material resistant to work at very high temperatures.	Manufacture of glass injection moulds.
B-033	ASTM	C87200	B148 B505 B271	176		30	85	105	Corrosion-proofing and appropriate for marine piping accessories.	Bearings, propellers, valve components and terminal boards.

Notes

1) For continuous and centrifugal casting, 10.5% of Sn is admissible.
2) The Ni content contains Cu.
3) For continuous and centrifugal casting, 5.6% of Sn is admissible.
4) In the June 1973 edition, the former reference G-BZ14 was done away by the DIN standard in favour of alloy reference DIN 1705 CuSn12.
5) Wrought material subject to other improvement processes subsequent to smelting to improve its mechanical characteristics; its final values depend on the process.
6) Excellent deformation when cold.

G - Sand casting.
GC - Continuous casting.
GK - Die casting.
GZ - Centrifugal casting.

B128 - Sand casting (depending on alloys)
B271 - Centrifugal casting.
B505 - Continuous casting.
B584 - Sand casting (depending on alloys)

FORMS OF SUPPLY
1 - Rough casting.
2 - Roughing.
3 - Thermally treated.
4 - Terminated on plan.
5 - Forging.