

STANDARD / SPECIFICATION	NUMBER
COPPER - ZINC ALLOYS (BRASS)	GOST 15797-70
PRESSURE TREATED TYPES	SUPPLEMENT GOST 1019-67 PART 1 OF 5

The present standard describes copper-zinc alloys, pressure treated, used for making semifinished products.

1. Name, mark, chemical composition and designation of alloys should correspond to the table indicated below :

Contd...../-

APPROVED	A. N. 10/72	3/77	MATH/SPECN.	
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STANDARD.

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Chemical composition in %.

Name of the alloys	Mark.	Basic elements										Admix.							Total	Purpose				
		Copper	Lead	Iron	Manganese	Aluminium	Tin	Silicon	Nickel	Arsenic	Zinc	Lead	Iron	Antimony	Bismuth	Phosphorus	Manganese	Arsenic			Tin	Sulphur	Aluminium	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
Tombac	96	95.0-97.0	-	-	-	-	-	-	-	-	-	0.3	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.2	For manufacture of bands, strip and tubes.
Tombac	90	88.0-91.0	-	-	-	-	-	-	-	-	-	0.03	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.2	For manufacture of sheets, bands and strips.
Semi-tombac	85	84.0-86.0	-	-	-	-	-	-	-	-	-	0.03	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For manufacture of sheets, bands, strips & tubes.
Semi-tombac	80	79.0-81.0	-	-	-	-	-	-	-	-	-	0.03	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For manufacture of sheets, bands, strips and wires.
Brass	70	69.0-72.0	-	-	-	-	-	-	-	-	-	0.03	0.07	0.002	0.002	0.005	-	0.005	0.005	0.002	-	-	0.2	For manufacture of bands and strips.
Brass	68	67.0-70.0	-	-	-	-	-	-	-	-	-	0.03	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For manufacture of sheets, bands, strips, tubes, bars, wires.
Brass	63	62.0-65.0	-	-	-	-	-	-	-	-	-	0.07	0.2	0.005	0.002	0.01	-	-	-	-	-	-	0.5	For manufacture of sheets, bands, strip tubes, bars, wire, foil.

REMAINING

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
Brass	60	59.0- 62.0	-	-	-	-	-	-	-	-	-	0.30	0.2	0.01	0.003	0.01	-	-	-	-	-	-	1.0	For manu- facture of tubes.
Alumi- nium brass	A	76.0- 77.2-79.0	-	-	-	1.75- 2.50	-	-	-	-	-	0.07	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For manu- facture of tubes.
Alumi- nium brass	A	58.0- 60.1-61.0	-	0.75- 1.50	0.1- 0.6	0.75- 1.50	-	-	-	-	-	0.40	-	0.005	0.002	0.01	-	-	-	-	-	-	0.7	For manu- facture of tubes & rods.
Al. Ni. brass	AN	57.0- 59.3-60.0	-	-	-	2.50- 3.50	-	-	2.0- 3.0	-	-	0.30	0.50	0.005	0.003	0.01	-	-	-	-	-	-	0.9	For manu- facture of tubes and rods.
Fe Mn. brass	M	57.0- 59.1-60.0	-	0.6- 1.2	0.5- 0.8	0.1- 0.4	0.3- 0.7	-	-	-	-	0.30	-	0.01	0.003	0.01	-	-	-	-	-	-	0.25	For manu- facture of strips, tubes, rods and wires.
Nickel brass	N	54.0- 55.5-67.0	-	-	-	-	-	-	5.0- 6.5	-	-	0.30	0.15	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For manufa- cture of sheets, bands, tubes, wires.
Magnese brass	M	57.0- 58.2-60.0	-	-	1.0- 2.0	-	-	-	-	-	-	1.0	0.005	0.002	0.01	-	-	-	-	-	-	-	1.2	For manufa- cture of sheets, bands, strips, rods, wires.
Manganese brass	M	55.0- 57.3-58.5	-	-	2.5- 3.5	0.5- 1.5	-	-	-	-	-	1.0	0.005	0.002	0.01	-	-	-	-	-	-	-	1.3	For forg- ings.
Tin brass	090-1	58.0- 61.0	-	-	-	-	0.25- 0.75	-	-	-	-	0.30	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.2	For band strip wire.
(Bronze) Tin brass	070-1	69.0- 71.0	-	-	-	1.0- 1.5	-	-	-	-	-	0.30	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For tubes.

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)		
(Bronze)																									
Tin	062-	61.0-	-	-	-	-	0.7-	-	-	-	-	0.10	0.10	0.005	0.002	0.01	-	-	-	-	-	-	-	0.3	For sheet, bands, tubes, rods.
Brass	-1	63.0					1.1																		
(Bronze)																									
Tin	060-	59.0-	-	-	-	-	1.0-	-	-	-	-	0.10	0.10	0.005	0.002	0.01	-	-	-	-	-	-	-	1.0	For wires.
brass	-1	61.0					1.5																		
Leaded	C	62.0-	2.4-	-	-	-	-	-	-	-	-	-	0.10	0.005	0.002	0.01	-	-	-	-	-	-	-	0.25	For strips, bands, rods, wires.
Brass	63-3	65.0	3.0																						
Leaded	C	72.0-	2.4-	-	-	-	-	-	-	-	-	-	0.10	0.005	0.002	0.01	-	-	-	-	-	-	-	0.25	For bands, strips and rods.
Brass	74-3	75.0	3.0																						
Leaded	C	63.0-	1.5-	-	-	-	-	-	-	-	-	-	0.10	0.005	0.002	0.01	-	-	-	-	-	-	-	0.3	For strips, bands, rods.
Brass	64-2	66.0	2.0																						
Leaded	C	59.0-	0.6-	-	-	-	-	-	-	-	-	-	0.15	0.005	0.002	0.01	-	-	-	-	-	-	-	0.5	For rods.
Brass	60-1	61.0	1.0																						
Leaded	C	57.0-	0.8-	-	-	-	-	-	-	-	-	-	0.5	0.010	0.003	0.02	-	-	-	-	-	-	-	0.75	For sheets, bands, strips, tubes, rods, wires.
brass	59-1	60.0	1.9																						
Leaded	C	57.0-	0.8-	-	-	-	-	-	-	-	-	-	0.5	0.01	0.003	0.02	-	-	-	-	-	-	-	1.5	For rods.
brass	59-1B	61.0	1.9																						
Iron	C	56.0-	0.7-	0.7-	-	-	-	-	-	-	-	-	-	0.01	0.003	0.02	-	-	-	-	-	-	-	0.5	For rods.
Lead	58-1A	58.0	1.3	1.3																					
brass																									
Silicon	K	79.0-	-	-	-	-	-	2.5-	-	-	-	0	0.6	0.05	0.003	0.02	0.5	-	0.2	-	0.1	1.5	1.5	For forgings and stampings.	
Brass	80-3	81.0						4.0																	
Arsenic	M	67.0-	-	-	-	-	-	-	-	-	0.025-	0.0	1.10	0.005	0.002	0.01	-	-	-	-	-	-	-	0.3	For tubes.
brass	58-	70.0									0.05														
		0.05																							

H. G. A. I. N. G.

STANDARD

COPPER - ZINC ALLOYS (BRASS)
 PARTIAL TREATMENT TYPES

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
Aluminum Arsenic Nickel Brass	A4	76.0	-	-	-	1.75- 2.50	-	-	-	0.025- 0.05	-	0.07	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For tubes
Iron Arsenic Nickel Brass	OM	69.0	-	-	-	1.0- 1.5	-	-	-	0.025- 0.05	-	0.07	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.3	For tubes
Aluminum Bismuth Nickel Silicon Manganese Brass	AH58	73.0	-	0.3- 0.7	1.6- 2.2	-	0.3- 0.7	2.0- 3.0	-	-	-	0.07	0.10	0.005	0.002	0.01	-	-	-	-	-	-	0.5	For strips tubes

NOTES

1. For antimagnetic alloys, content of iron should not exceed 0.03%.
2. The admixtures, not indicated in table, are considered as common admixtures.
3. In the brass, mark 68, intended for manufacturing of parts for special purpose, content of admixtures should not exceed : Iron - 0.07%, Antimony 0.002%, Phosphorus - 0.05%, Arsenic 0.05%, Sulphur - 0.002% (Total 0.2%).
4. In copper - zinc alloys of all marks, except mark 70, 68, 68H, 68-2, 68-3, 68-4, 68-5, 68-6, 68-7, 68-8, 68-9, 68-10, 68-11, 68-12, 68-13, 68-14, 68-15, 68-16, 68-17, 68-18, 68-19, 68-20, 68-21, 68-22, 68-23, 68-24, 68-25, 68-26, 68-27, 68-28, 68-29, 68-30, 68-31, 68-32, 68-33, 68-34, 68-35, 68-36, 68-37, 68-38, 68-39, 68-40, 68-41, 68-42, 68-43, 68-44, 68-45, 68-46, 68-47, 68-48, 68-49, 68-50, 68-51, 68-52, 68-53, 68-54, 68-55, 68-56, 68-57, 68-58, 68-59, 68-60, 68-61, 68-62, 68-63, 68-64, 68-65, 68-66, 68-67, 68-68, 68-69, 68-70, 68-71, 68-72, 68-73, 68-74, 68-75, 68-76, 68-77, 68-78, 68-79, 68-80, 68-81, 68-82, 68-83, 68-84, 68-85, 68-86, 68-87, 68-88, 68-89, 68-90, 68-91, 68-92, 68-93, 68-94, 68-95, 68-96, 68-97, 68-98, 68-99, 68-100, the content of admixture of nickel upto 0.5%, and in alloy of mark 68-1 and 68-2 upto 1% is allowed (due to copper content).
5. In brass of mark 68-1, the total admixtures of iron and silicon should not exceed 0.5%.
6. In Brass of mark 68-2 as per the customer's requirements the content of manganese is set in the limits of 3.0 to 4.0%.
7. In brass of mark 68-3 and 68-4, intended for profile castings and blocks for hot treatment (forging), content of phosphorus should not exceed 0.03%.