

# Chemical Composition of Copper

Material	Normal Composition	Nearest Relevant Composition Specification		
		BS: 2870	ISO	JIS
Electrolytic Tough Pitch H.C. Copper	99.92% Min. Cu	C 101	Cu ETP 1337	H 3100 C 2100
Phosphorous Deoxidized Copper (DONA)	99.90% Min. Cu P. 0.0134-0.05	C 106	Cu DHP 1337	H 3100 C 1220

## SPECIFICATIONS

Material	Tensile temper strength elongation N/mm% on 50 mm		Vickers Hardness	Complies with or falls within ISO	JIS	'O'	210 Min 35 Min	55 Max
	M	1/2H						
Electrolytic Tough	M	210 Min 35 Min	65 Min	Cu ETP	H 3100			
Pitch H.C. Copper	1/2H	240 Min 10 Min	70 to 95	ISO : 1337	C 1100			
	H	290 Min	90 Min					
	'O'	210 Min 35 Min	55 Max					
Phosphorous	M	210 Min 35 Min	65 Min	Cu DHP	H 3100			
Deoxidised Copper	1/2H	240 Min 10 Min	70 to 95	ISO : 1337	C 1220			
	H	290 Min	90 Min					

- **'O'** : Annealed Condition
- **M** : 1/4 Hard
- **1/2** : Half Hard
- **H** : Full Hard
- **\*** : Electrical conductivity at 20°. Cel(% IACS) - 100-101 (For Cu ETP 'O' temper)

# Chemical Composition of Brass

Constituent	Alloys Designation percent	
<b>CuZn30</b>	<b>CuZn37</b>	
Copper	68.5 to 71.0	62.0 to 65.0
Lead, max	0.05	0.30
Iron, max	0.05	0.10
Total impurities, max	0.03	0.60
Zink	Reminder	Reminder
*In case the material is required for hot lead may be restricted to 0.015 percent. Max		

Constituent	Alloys Designation percent		
(1)	(2)	(3)	(4)
Copper	56.0-59.0	60.0-63.0	60.0-63.0
Lead	2.0-3.5	2.5-3.7	0.5-1.5
Iron,max	0.35	0.35	0.2
Total other impurities (Excluding iron),max	reminder	reminder	reminder

## Devoted for Customer Satisfaction

Material	Temper	Tensile Strength N/mm	Elongation % on 50 MM	Vickers Hardness	Complies with or falls within ISO	JIS
95/5 Cap Copper	'O'			75 Max 95 Max	ISO 426/1 Cu Zn 10	H 3100 C 2100
		245 Min	35 Min	110 Min	ISO 426/1	H 3100
90/10 1/2H Metal H	'O' 1/2H H	310 Min 350 Min	7 Min 3 Min	75 Max 95 Min 110 Min	Cu Zn 15 ISO 426/1 Cu Zn 20	C 2200 H 3100 C 2300
85/15 Guilding Metal	'O' 1/2H H	245 Min 325 Min 370 Min	35 Min 7 Min 3 Min	80 Max 95 Min 120 Min 80Max	ISO 426/1 Cu Zn 20 ISO 426/1 Cu Zn 30	H 3100 C 2400 H

						3100 C 2600
80/20 Brass	'O' 1/2H 1/4H	265 Min 340 Min 400 Min	40 Min 10 Min 5 Min	80 Max 95 Min 120 Min	ISO 426/1 Cu Zn 20	H 3100 C 2400
70/30 (Cartridge Brass)	'O' 1/2H H	280 Min 325 Min 350 Min 415 Min	50 Min 35 Min 20 Min 5 Min	80 Max 75 Max 100 Min 125 Min	ISO 426/1 Cu Zn 30	H 3100 C 2600
65/35 Brass (2 and 1 Brass)	'O' 1/4H 1/2H H	280 Min 340 Min 385 Min 460 Min 525 Min	45 Min 35 Min 20 Min 5 Min	80 Max 75 Max 110 Min 135 Min 165 Min		
63/37 Brass (Brass Metal)	'O' 1/4H 1/2H H	280 Min 340 Min 485 Min 460 Min 525 Min	40 Min 30 Min 15 Min 5 Min			

- **'O'** : Annealed Condition
- **1/4H** : Quarter Hard
- **1/2** : Half Hard
- **H** : Hard
- **EH** : Extra Hard