

## C240 (CuZn20)

### Composition

Cu* (%)	Fe (%)	Pb (%)	Zn (%)
78.5-81.5	0.05 max	0.05 max	rem

\*) Cu + sum of named elements min 99.8 %

### Physical Properties

Temper	Melting point (liquidus)	Density	Specific heat cap. at 68 F (20 °C)	Electrical cond. Nom in black	Thermal cond. at 68 F (20 °C)	Mod. of elasticity	Coef. of therm.exp at 68 F (20 °C)
	°F °C						
All	1830	0.313	0.09	32	81	16	10.6
	999	8.7	0.38	32	140	110	19.1

### Mechanical Properties

At max 0.040"  
(1 mm)

Temper	R <sub>p0.2</sub> Yield strength ksi N/mm <sup>2</sup>	R <sub>m</sub> Tensile strength ksi N/mm <sup>2</sup>	A <sub>50</sub> Elongation 2" %	Hardness for reference HR30T HV	Min bend ratio 90°		Min bend ratio 180°	
					GW	BW	GW	BW
Soft	20 138	44-54 305-373	50		0.0	0.0	0.0	0.0
H02 (1/2H)	42 290	55-65 379-448	18	62	0.0	0.0	1.0	1.5
H04 (H)	61 421	68-77 469-531	4	71	0.0	0.0	1.5	3.0
H06 (EH)	68 469	78-87 538-600	2	75	0.5	1.5	2.0	
H08 (SH)	76 524	85-93 586-642	1	77	1.5		4.0	
H10 (ES)	78 538	89-97 614-669	1	78	3.0			

Other tempers are available upon request.

Data for information only and not for use as purchase specification.

Yield strength, Elongation and Hardness are typical values for each temper.

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### Alloy attributes

Low Brass, 80 % - 240 alloy with a nominal composition of 80 % copper and 20 % zinc approaches the mechanical properties of 260 alloy but with corrosion properties only slightly inferior to 230 alloy. This alloy has a color between yellow 260 and golden red 230 alloy and finds distinctive uses in decorative trim applications. Its color and tonal qualities prove advantageous for musical instruments. Thermostatic and instrument bellows and flexible hose utilize the combined ductility, strength and corrosion resistance characteristics of this alloy.

**High ductility**  
**Good corrosion resistance**  
**Good electrical and thermal conductivity**  
**Good spring properties**

### Typical applications

Architectural metalwork, electrical battery caps, instrument bellows, musical instruments, clock dials, flexible hoses, tokens, medallions, and spandrels.

### Design limitations

Severely cold worked articles may be susceptible to stress corrosion cracking in certain media as ammonia or its compounds, mercury or its compounds. A stress-relief anneal can be utilized to minimize this susceptibility.

Exposure to acidic media may result in dezincification. For these cases a higher copper content alloy is suggested.

### Applicable specifications

ASTM B36