DATA SHEET

Phosphorbronze | Hexagon Bars

Alloy	Cu Sn 8, CW453K mostly also available in Cu Sn 8 P, CW459K
Method of Manufacture	drawn
Specification	EN 12163
Tolerance	DIN 1763, h12 14-17 mm A/F + 0/-0.18 mm 19-30 mm A/F + 0/-0.21 mm 32-50 mm A/F + 0/-0.25 mm 55 mm A/F + 0/-0.30 mm
Temper	mostly R450
Machinability	moderate
Hot Working	not good
Cold Working	good
Corrosion Resistance	very good versus many media, incl. sea water
Sliding Properties	very good
REACH	no obligations
RoHS	conformal

Mechanical Properties

	Tensile strength R_m	Yield stress $R_{p\,0,2}$	Elongation A	Hardness HB
M	as obtained			
R390	≥ 390 N/mm²	≥ 280 N/mm²	≥ 45 %	
H085				85-125
R450	≥ 450 N/mm²	≥ 280 N/mm²	≥ 26 %	
H135				135-165
R550	≥ 550 N/mm²	≥ 400 N/mm²	≥ 15 %	
H160				160-190

Chemical Composition

Cu Rest
Sn 7.5 - 8.5 %
P 0.01 - 0.4 %

Impurities, max.:
Fe 0.1 %, Ni 0.2 %, Pb 0.02 %, Zn 0.2 %
other 0.2 %

Comparable Specifications

Cu Sn 8, 2.1030, DIN 17 662
C 52 100 UNS
PB 104, BS 2870 - 2875

Better corrosion resistance than tin bronzes with lower tin content, higher strength and very good sliding properties and wear resistance. Good cold formability, good solderability. Sliding components, slide bearings (especially thin-walled ones) and sliding guides. Highly stressed worm and gear wheels, screws and bolts.

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