COPPER ALLOY
JM 7-20

CuAl10Ni5Fe4

Composition

Element w/w	Al %	Cu %	Fe %	Mn %	Ni %	Pb %	Si %	Sn %	Zn %	Others %
min.	8,5	Rem.	3,0		4,0					
max.	11,0		5,0	1,0	6,0	0,05	0,2	0,1	0,4	0,2

Mechanical properties

Material condition designation	Proof Strength $Rp_{0,2}$ [MPa]	Tensile strength R*m* [MPa]	Elongation A_5 [%]	Brinell hardness HBW [HB]
R680	≥320	≥680	≥10	≥170
H170				170-210
R740	≥400	≥740	≥8	≥170
H200				≥200

Physical properties

Density [g/cm^3]	Young's modulus [GPa]	Thermal conductivity [W/mK]	Electrical conductivity [%IACS]
7,6	115	38	9

Fabrication properties

Machinability	Weldability	Solderability	Stress-relieving temperature
Good	Good	Not recommended	315 °C

Applications

Nuts, bolts, shafting, pump parts, valve seats, faucet balls, gears, cams, structural members, and tube sheets for condensers in power stations and desalting units. High strength excellent resistance to erosion and corrosion in seawater and many other aggressive environments. In addition, the alloy offers very good wear and abrasion resistance, an ability to withstand shock loading and the retention of properties at cryogenic temperatures.

Comparable standards

Swedish standard	SS-EN 12163	CW307G
European standard	EN 12163	CW307G
US standard	UNS	C63000
British standard (old)	BS	2872/2874, CA 104
German standard (old)	DIN	17665 CuAl10Ni5Fe4