

Copper Alloys

AMS 4590 (C63020)

Datasheet Updated
05 August 2021

SPECIFICATIONS

Aerospace	AMS 4590
US	C63020

Aluminum-nickel-iron bronze alloy is used in medium to heavy duty applications.

CHEMICAL COMPOSITION

Element	% Present
Nickel (Ni)	0.00 - 5.30
Aluminium (Al)	0.00 - 10.70
Iron (Fe)	0.00 - 5.30
Manganese (Mn)	0.00 - 0.90
Copper (Cu)	Balance

ALLOY DESIGNATIONS

- ASTM B150
- C63020
- TQ30

SUPPLIED FORMS

- Bar
- Castings
- Forgings
- Extrusions

APPLICATIONS

- Oil & Gas - Rock bit bearings, bushings, & washers, BOP parts, wellhead components
- Aerospace - Landing gear parts, strut bushings, bearings
- Automotive - Bearings, off-Highway truck bushings, forming roll bearings
- Marine - Pump parts, bushings, valves
- Industrial - Cams, shafting, hydraulic bushings for earth moving equipment, valve balls, wear plates
- Cryogenics, Drill guide bushings
- Military - Tank track bearings, bushings, aircraft components

CHARACTERISTICS

- Good corrosion and erosion resistance
- Excellent in sea water
- High strength properties
- Good machinability
- Low friction properties
- High electrical & thermal conductivity
- good ductility
- Good welding potential
- Low volatility under high vacuum

MECHANICAL PROPERTIES

Property	Value
Elongation A50 mm	6-10 %
Hardness Rockwell C	26-34 HRC

DISCLAIMER

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