

COPPER-147 (Machining Copper)

Typical Analysis (Ave. values %)	Cu	S		
	99.55%	0.45%		
NEAREST STANDARD	AS	BS	ASTM	
	1567-147	2874-C111	B301-14720	

DESCRIPTION	The addition of sulphur produces a structure which gives good machinability and retains a high level of electrical and thermal conductivity.
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APPLICATIONS	Forgings, screw machine products and parts requiring high conductivity, extensive machining, corrosion resistance, copper colour, or a combination of these; electrical connectors, motor and switch parts, plumbing fittings, cold headed and machine parts, cold forgings, furnace brazed articles, screws, soldering coppers, rivets and welding torch tips.
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MECHANICAL PROPERTIES		Tensile strength MPa	Elongation %	Hardness HV
	Drawn (H)	300	22	100

FABRICATION PROPERTIES	Cold working capacity	Fair
	Riveting & peening	Fair
	Thread rolling	Good
	Bending	Fair-Good
	Cold heading	Not recommended
	Machinability rate	85%
	Hot working capacity	Good
	Hot forging rating	Good
	Hot working temperature	850°C
	Annealing temperature	575°C
	Stress relieving temperature	250°C

CORROSION RESISTANCE	Industrial atmosphere	Excellent
	Rural atmosphere	Excellent
	Marine atmosphere	Excellent
	Sea water	Good
	Drinking water	Excellent

PHYSICAL PROPERTIES	Density	8.94 (kg/dm ³)
	Melting point (Liquidus)	1073°C
	Melting point (Solidus, Eutectic)	1063°C
	Coefficient of thermal expansion	17.6-10 ⁻⁶ m/(m.K)
	Thermal conductivity	388-W/(m.K)
	Thermal capacity	372-J/(kg.K)
	Electrical resistivity	1.7-Ohm.mm ² /m
	Electrical conductivity	70% IACS
	Modulus of Elasticity (tension)	117GPa
	Modulus of Elasticity (shear)	44GPa

JOINING PROPERTIES	Soft soldering	Good-Excellent
	Silver soldering	Good-Excellent
	Brazing	Fair
	Oxy acetylene welding	Fair
	Carbon arc welding	Fair
	Gas shielded arc welding	Good
	Coated metal arc welding	Not recommended
	Resistance welding	Not recommended

SIZE RANGE	Round	9.53 to 101.6 mm
	Square	25.4 to 101.6 mm
	Flat	76.2 x 6.35 to 152 x 50 mm

Sizes normally stocked in Australia. Some branches may not hold the entire range.
Other sizes available on request.

LOCATIONS

Bohler Uddeholm Australia Pty Ltd ABN 15000013052

Sydney	129-135 McCredie Rd Guildford	2161	Ph (02) 8724 5554	Fax (02) 8724 5555
Newcastle	3 Pavilion Pl Cardiff	2285	Ph (02) 4954 6611	Fax (02) 4956 5773
Albury	1 Eames St Albury	2640	Ph (02) 6041 3399	Fax (02) 6041 1820
Wollongong	40 Doyle Ave Unanderra	2526	Ph (02) 4272 6544	Fax (02) 4272 7563
Marayong	1/21 Binney Rd Marayong	2148	Ph (02) 9831 4431	Fax (02) 9671 1682
Melbourne	282-290 Greens Rd Dandenong	3175	Ph (03) 9767 5554	Fax (03) 9767 5555
Bayswater	4 Ramage St Bayswater	3153	Ph (03) 9729 7356	Fax (03) 9738 0850
Adelaide	1 Williams Cir Pooraka	5095	Ph (08) 8368 4554	Fax (08) 8368 4555
Brisbane	12-18 Limestone St Darra	4076	Ph (07) 3712 9554	Fax (07) 3712 9555
Townsville	9-11 Caldwell St Garbutt	4814	Ph (07) 4479 4800	Fax (07) 4725 1316
Perth	29-33 Gauge Cir Canningvale	6155	Ph (08) 9455 8672	Fax (08) 9455 8673
Kewdale	5 Beete St Welshpool	6106	Ph (08) 9350 9582	Fax (08) 9350 9683
Launceston	20 Murphy St Invermay	7248	Ph (03) 6334 3542	Fax (03) 6331 4001

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