

## 385 BRASS Free machining

Typical Analysis (Ave. values %)	Cu	Pb	Zn	
	58%	4%	38%	
NEAREST STANDARD	AS	BS	ASTM	DIN
	1567-385	2847-CZ121	B455	1.7672 CuZn39Pb3

<b>DESCRIPTION</b>	Alloy 385 is used in mass production of brass components in high speed automatic lathes where machining output and long tool life is required and where no further cold forming operations after machining are required.
	<p>The superior machining characteristics of Alloy 385 are due to the rapid chill effect of continuous casting which gives a fine uniform lead distribution without segregation and suppresses formation of brittle phases which cause tool wear, in summary Alloy 385 offers:</p> <ul style="list-style-type: none"> <li>• Superior surface finish without tooling modification.</li> <li>• Improved tool life.</li> <li>• Cleaner threads without build up or breakage.</li> <li>• Cutting tools previously using a negative rake were modified to positive rake.</li> </ul>

<b>APPLICATIONS</b>	Screw thread components, Nuts and Bolts
---------------------	---

<b>MECHANICAL PROPERTIES</b>	Drawn (H)	Tensile strength MPa	0.2% Proof stress MPa	Elongation %	Hardness HV
	Up to 13 mm	495	310	20	160
	13 to 50 mm	430	230	27	135
	Over 50 mm	400	155	35	110

<b>FABRICATION PROPERTIES</b>	Cold working capacity	Poor
	Riveting & peening	Not recommended
	Thread rolling	Fair
	Bending	Fair
	Cold heading	Not recommended
	Machinability rate	100%
	Hot working capacity	Fair
	Hot forging rating	Poor
	Hot working temperature	700-800°C
	Annealing temperature	450-600°C
	Stress relieving temperature	250-300°C

<b>CORROSION RESISTANCE</b>	Industrial atmosphere	Good
	Rural atmosphere	Excellent
	Marine atmosphere	Good
	Sea water	Fair
	Drinking water	Fair

<b>PHYSICAL PROPERTIES</b>	Density	8.47 (kg/dm <sup>3</sup> )
	Melting point (Liquidus)	890°C
	Melting point (Solidus, Eutectic)	875°C
	Coefficient of thermal expansion	20.0-10 <sup>-6</sup> m/(m.K)
	Thermal conductivity	110-W/(m.K)
	Electrical resistivity	61.6-Ohm.mm <sup>2</sup> /m
	Electrical conductivity	28% IACS
	Modulus of Elasticity (tension)	96GPa
	Modulus of Elasticity (shear)	36GPa

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

Round Drawn										
<b>SIZE RANGE</b>	3.18	6.35	12	19.05	23.81	31.75	44.5	63.5	88.9	127
	3.97	7.94	12.7	20	25.4	34.93	47.63	69.85	95.25	139.7
	4.76	9.53	14.29	20.64	28.75	38.1	50.8	76.2	101.6	152.4
	6	11.1	15.88	22.22	30.16	41.28	57.15	82.55	114.3	

Hexagonal Drawn										
<b>SIZE RANGE</b>	12.7	15.87	19.05	22.22	27.94	30.15	34.93	44.45	50.8	
	14.29	18	20.64	25.4	28.58	31.75	38.1	47.63	57.15	

Square Drawn										
<b>SIZE RANGE</b>	6.35	12.7	19.05	25.4	38.1	50.8				
	9.52	15.88	22.22	31.75	44.45					

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

[www.buau.com.au](http://www.buau.com.au)

Every care has been taken in listing this information, particularly specifications. Bohler Uddeholm Australia Pty Ltd will not accept responsibility for any loss or other damage caused to any person or Company as a result of the use of information contained herein

Notes