

2011 - ALUMINIUM ALLOY

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|-------------------------------------|------------|-----|-----|-----|-------------|-----|------|
| Typical Analysis (Ave. values %) | Cu | Fe | Pb | Bi | Si | Zn | Al |
| | 5.5 | 0.7 | 0.4 | 0.4 | 0.4 | 0.3 | 92.0 |
| NEAREST STANDARD | BS | | | | ISO | | |
| | EN AW-2011 | | | | Al Cu6 BiPb | | |

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| DESCRIPTION | Heat treatable alloy with high strength, good machinability and fatigue strength. Standard condition of supply - Temper T4. |
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| APPLICATIONS | Applications where good machinability and high strength are required, such as machine parts, bolts, nuts, screws etc. |
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| MECHANICAL PROPERTIES | Temper | Tensile strength MPa | 0.2% Proof stress MPa | Elong.A5 % | Elong.A50 % | Hardness Vickers |
| | T3 | 310-365 | 260-290 | 10-15 | 10-15 | 100 |
| | T4 | 320-350 | 240-270 | 10-18 | 18 | 95 |
| | T6 | 310-395 | 230-300 | 8-12 | 10-12 | 115 |
| | T8 | 370-420 | 275-315 | 10-13 | 10-12 | 120 |

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| FABRICATION PROPERTIES | Machinability | Excellent |
| | Deep drawing | Poor |
| | Spinning | Poor |
| | Extruding | Good |

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| PHYSICAL PROPERTIES | Density | 2.84 (kg/dm ³) |
| | Melting point (Liquidus) | 645°C |
| | Melting point (Solidus, Eutectic) | 540°C |
| | Coefficient of thermal expansion | 23- $\mu\text{mm}^{-1}\text{K}^{-1}$ |
| | Thermal conductivity | 177-W m ⁻¹ K ⁻¹ |
| | Specific heat capacity | 863 JKg ⁻¹ K ⁻¹ |
| | Electrical resistivity | 38 n Ω m |
| | Electrical conductivity | 45% IACS |

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| JOINING PROPERTIES | Coated metal arc welding | Poor |
| | Soldering | Fair |
| | Brazing | Poor |
| | Oxy acetylene welding | Poor |
| | Gas shielded arc welding | Poor |

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| CORROSION RESISTANCE | Industrial atmosphere | Poor |
| | Rural atmosphere | Fair |
| | Marine atmosphere | Poor |
| | General | Poor-Fair |

| Round Cold Drawn Temper T6 | | | | | | | | | | |
|----------------------------|----|----|----|-----|-----|-----|-----|-----|--|--|
| SIZE RANGE | 25 | 42 | 55 | 80 | 110 | 140 | 170 | 250 | | |
| | 35 | 45 | 65 | 90 | 120 | 150 | 180 | | | |
| | 40 | 50 | 75 | 100 | 130 | 160 | 200 | | | |

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 | | | | | | |
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