

6061 - ALUMINIUM ALLOY

| | | | | | | | | | |
|-------------------------------------|------------|------|-----|-----|------|------------|------|-----|------|
| Typical Analysis (Ave. values %) | Mg | Mn | Fe | Si | Zn | Cr | Ti | Cu | Al |
| | 1.0 | 0.15 | 0.7 | 0.6 | 0.25 | 0.2 | 0.15 | 0.3 | 96.5 |
| NEAREST STANDARD | BS | | | | | ISO | | | |
| | EN AW-6061 | | | | | Al Mg1SiCu | | | |

| | |
|--------------------|---|
| DESCRIPTION | Heat treatable alloy of medium strength, good corrosion resistance and weldability. |
|--------------------|---|

| | |
|---------------------|--|
| APPLICATIONS | Road and rail vehicle frames. Heavy duty structures. |
|---------------------|--|

| | | | | | | |
|----------------------------------|-----------|-------------------------|-----------------------------|---------------|----------------|---------------------|
| MECHANICAL PROPERTIES | Temper | Tensile strength MPa | 0.2% Proof stress MPa | Elong.A5 % | Elong.A50 % | Hardness Vickers |
| | O | 125 | 55 | 18-27 | 26 | 30 |
| | T4 | 180-235 | 110-140 | 14-21 | 16-21 | 70 |
| | T6 | 260-310 | 240-270 | 7-14 | 8-12 | 100 |

| | | |
|-----------------------------------|---------------|------|
| FABRICATION PROPERTIES | Machinability | Good |
| | Extruding | Good |
| | General | Fair |

| | | |
|--------------------------------|-----------------------------------|---|
| PHYSICAL PROPERTIES | Density | 2.70 (kg/dm ³) |
| | Melting point (Liquidus) | 650°C |
| | Melting point (Solidus, Eutectic) | 580°C |
| | Coefficient of thermal expansion | 23.3- $\mu\text{m m}^{-1}\text{K}^{-1}$ |
| | Thermal conductivity | 166-W $\text{m}^{-1}\text{K}^{-1}$ |
| | Specific heat capacity | 895 JKg ⁻¹ K ⁻¹ |
| | Electrical resistivity | 40 n Ω m |
| | Electrical conductivity | 43% IACS |

| | | |
|---------------------------|--------------------------|-----------|
| JOINING PROPERTIES | Spot welding | Good |
| | Soldering | Good |
| | Brazing | Good |
| | Oxy acetylene welding | Good |
| | Gas shielded arc welding | Excellent |

| | | |
|-----------------------------|-----------------------|------|
| CORROSION RESISTANCE | Industrial atmosphere | Good |
| | Marine atmosphere | Good |
| | General | Good |

| Round cold Drawn Temper T6 | | | | | | | | | | |
|-----------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|--|
| SIZE RANGE | 22.22 | 40 | 60 | 80 | 100 | 115 | 150 | 190 | 260 | |
| | 25 | 45 | 65 | 85 | 101.6 | 120 | 160 | 200 | | |
| | 30 | 50 | 70 | 90 | 105 | 130 | 170 | 220 | | |
| | 35 | 55 | 75 | 95 | 110 | 140 | 180 | 250 | | |
| Plate Cold Rolled Temper T6 | | | | | | | | | | |
| SIZE RANGE | 10 | 20 | 40 | 63.5 | 80 | 95.2 | 114.3 | 140 | 254 | |
| | 12.7 | 25.4 | 44.45 | 69.85 | 82.55 | 101.6 | 115 | 152.4 | 305 | |
| | 15.9 | 31.8 | 50.8 | 70 | 88.9 | 105 | 120 | 180 | | |
| | 19.1 | 38.1 | 57.15 | 76.2 | 90 | 110 | 130 | 203 | | |

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

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