

7075 - ALUMINIUM ALLOY

Typical Analysis (Ave. values %)	Mg	Mn	Fe	Si	Zn	Cr	Ti	Cu	Zr+Ti	Al
	2.5	0.3	0.5	0.4	5.5	0.23	0.2	1.6	0.25	88.5
NEAREST STANDARD	BS					ISO				
	EN AW-7075					Al Zn5.5MgCu				

DESCRIPTION	Heat treatable, very high strength alloy. Very high fatigue strength.
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APPLICATIONS	Machine parts and tools for rubber and plastic.
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MECHANICAL PROPERTIES	Temper	Tensile strength MPa	0.2% Proof stress MPa	Elong.A5 %	Elong.A50 %	Hardness Vickers
	O	225	105	-	17	65
	T6	530-570	460-505	7-10	10	160
	T7	505	435	13	12	150

FABRICATION PROPERTIES	Machinability	Excellent
	Extruding	Fair
	General	Fair

PHYSICAL PROPERTIES	Density	2.81 (kg/dm ³)
	Melting point (Liquidus)	635°C
	Melting point (Solidus, Eutectic)	475°C
	Coefficient of thermal expansion	23.5- $\mu\text{m m}^{-1}\text{K}^{-1}$
	Thermal conductivity	134-W $\text{m}^{-1}\text{K}^{-1}$
	Specific heat capacity	862 JKg ⁻¹ K ⁻¹
	Electrical resistivity	52 n Ω m
	Electrical conductivity	33% IACS

JOINING PROPERTIES	Spot welding	Poor
	Soldering	Poor
	Brazing	Poor
	Oxy acetylene welding	Poor
	Gas shielded arc welding	Poor

CORROSION RESISTANCE	Industrial atmosphere	Poor
	Rural atmosphere	Poor
	Marine atmosphere	Poor
	General	Poor

Round										
SIZE RANGE	6.25	114	115	120	130	152	155	160	180	
Plate										
SIZE RANGE	5	65	75	80	100	125	150	180	200	203
										300

<u>LOCATIONS</u>						
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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