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.

APPLICATIONS	Machine parts and tools for rubber and plastic.

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^{o}C
	Melting point (Solidus, Eutectic)	475^{o}C
	Coefficient of thermal expansion	23.5-µmm^{-1}K^{-1}
	Thermal conductivity	134-W m^{-1}K^{-1}
	Specific heat capacity	862 JKg^{-1} K^{-1}
	Electrical resistivity	52 nΩ 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

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Notes