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Material data sheet

EN AW 6082 [EN AW-Al Si1MgMn]

Compliance with the requirements of the EU directives RoHS 2011/65/EU and ELV 2000/53/EC

1) Chemical composition according to DIN EN 573-3 [% by mass, remainder Al]

%	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Bi	Pb	Each
min.	0.7	-	-	0.40	0.6	-	-	-	-	-	-	-
max.	1.3	0.50	0.10	1.0	1.2	0.25	-	0.20	0.10	-	-	0.15

2) Mechanical properties according to DIN EN 754-2 drawn / DIN EN 755-2 extruded

Temper	Dimensions in mm		R_m Mpa		$R_{p0,2}$		A% min.	A_{50mm}%	HBW
	D^a	S^b	min.	max.	min.	max.	min.	min.	Typical value
T6[c]	≤ 80	≤ 80	310	-	255	-	10	9	95
T6[c]	≤20	≤20	295	-	250	-	8	6	95
	20<D≤150	20<S ≤150	310	-	260	-	8	-	95
	150<D≤200	150<S≤200	280	-	240	-	6	-	95
	200<D≤250	200<S≤250	270	-	200	-	6	-	95

D^a = Diameter for round rod / S^b= Width across flat for square and hexagonal rod, Thickness for rectangular rod / c Properties may be obtained by press quenching.

Classification: 1=very good / 6=insufficient

Physical properties		**General properties**			
Density g/cm³	2.70	**Corrosion resistance to**		**Surface treatment**	
Modulus of elasticity MPa	70000	atmospheric influences	1	Protection anodizing	1
Thermal conductivity W/(m K)	170-220	seawater	2	Decorative anodizing	3
Coefficient of thermal expansion (20-100 °) 10^{-6}/K	23.4	**Brazeability:**		Painting/Coating	2
Electrical conductivity MS/m	24-32	Brazing with flux	2		
		Brazing without flux	4		
		Friction soldering	2		
		Soft soldering with flux	3		

Weldability		**Machining properties**	
Gas	3	Annealed	4
TIG	2	Work hardened	-
MIG	1	Precipitation hardened	2
Resistance fusion welding	3	Cutting speed v=m/min	400-800
		Chip shape	Spirals

Errors and changes excepted/This document is not subject to revision.