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Material data sheet

EN AW 5083 [EN AW-Al Mg4,5Mn0,7]

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

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

%	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Remarks	Each
min.	-	-	-	0.40	4.0	0.05	-	-	-	-	-
max.	0.40	0.40	0.10	1.0	4.9	0.25	-	0.25	0.15	-	0.15

2) Mechanical properties according to DIN EN 485-2

Temper	Dimension in mm		R_m MPa		$R_{p0,2}$ MPa		A% min.	A_{50mm}%	HBW
	D^a	S^b	min.	max.	min.	max.	min.	min.	Typical value
T6	≥0,4	1,5	310	-	260	-	-	6	94
T651	1,5	3,0	310	-	260	-	-	7	94
T62	3,0	6,0	310	-	260	-	-	10	94
	6,0	12,5	300	-	255	-	-	9	91
	12,5	60,0	295	-	240	-	8	-	89
	60,0	100,0	295	-	240	-	7	-	89
	100,0	150,0	275	-	240	-	6	-	84
	150,0	175,0	275	-	230	-	4	-	83
	175,0	350,0	260	-	220	-	2	-	-

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	2.66	**Corrosion resistance to**		**Surface treatment**	
Modulus of elasticity MPa	71000	atmospheric influences	1	Protection anodizing	2
Thermal conductivity W/(m K)	110-140	seawater	1	Decorative anodizing	4
Coefficient of thermal expansion (20-100 °) 10^{-6}/K	24.2			Painting/Coating	4
Electrical conductivity MS/m	16-19	**Brazeability:**			
		Brazing with flux	5		
		Brazing without flux	5		
		Friction soldering	3		
		Soft soldering with flux	5		

Weldability		**Machining properties**	
Gas	4	Bending	3
TIG	2	Spinning	2(O)
MIG	2	Deep drawing up to (temper)	2(O)
Resistance fusion welding	2		

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

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