

# Material data sheet

## EN AW 1050A [EN AW-AI 99,5]

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	Remarks	Each
<b>min.</b>	-	-	-	-	-	-	-	-	-	-	-
<b>max.</b>	0.25	0.40	0.05	0.05	0.05	-	-	0.07	0.05	-	0.03

### 2 ) Mechanical properties according to DIN EN 485-2

Temper	Dimensions in mm		R <sub>m</sub> MPa		R <sub>p0,2</sub> MPa		A%	A <sub>50mm</sub> %	HBW
	D <sup>a</sup>	S <sup>b</sup>	min.	max.	min.	max.	min.	min.	Typical value
<b>O/H111</b>	0,2	0,5	65	95	20	-	-	20	20
	0,5	1,5	65	95	20	-	-	22	20
	1,5	3,0	65	95	20	-	-	26	20
<b>H24</b>	3,0	6,0	65	95	20	-	-	29	20
	0,2	0,5	105	145	75	-	-	3	33
	0,5	1,5	105	145	75	-	-	4	33
<b>H19</b>	1,5	3,0	105	145	75	-	-	5	33
	3,0	6,0	105	145	75	-	-	8	33
	0,2	0,5	155	-	140	-	-	1	45
	0,5	3,0	150	-	130	-	-	1	45

D<sup>a</sup> = Diameter for round rod / S<sup>b</sup> = 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/cm <sup>3</sup>	2.70	<b>Corrosion resistance to atmospheric influences</b>	2	<b>Surface treatment</b>	1
Modulus of elasticity MPa	69000				
Thermal conductivity W/(m K)	210-220	<b>Brazeability:</b>	1	Decorative anodizing	1
Coefficient of thermal expansion (20-100 °) 10 <sup>-6</sup> /K	23.5			Brazing with flux	
Electrical conductivity MS/m	34-36	Brazing without flux	1		
		Friction soldering	1		
		Soft soldering with flux	1		
Weldability		Machining properties			
Gas	2	Bending			1
TIG	2	Spinning			1
MIG	3	Deep drawing up to (temper)			1(H14)
Resistance fusion welding	5				

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