

Material data sheet

AA-2015 unleaded free-cutting quality

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

1) Chemical composition [% by mass, remainder Al]

%	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Bi	Sn	Each
min.	-	-	3.9	0.40	0.6	-	-	-	-	-	0.7	-
max.	0.8	0.4	4.5	0.8	1.1	0.15	-	0.5	0.20	0.40	1.3	0.15

2) Mechanical properties

Temper	Dimensions in mm		R _m MPa		R _{p0,2} MPa		A% min.	A _{5mm} %	HBW
	D ^a	S ^b	min.	max.	min.	max.	min.	min.	Typical value
T3	6≥80	15≥80	370	-	250	-	-	8	-
T4	20≥80	15≥80	370	-	250	-	-	8	-
T4	80≥160	80≥120	340	-	220	-	-	8	-

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/cm ³	ns	Corrosion resistance to atmospheric influences seawater	2 3	Surface treatment Protection anodizing Painting/Coating		3 ns
Modulus of elasticity MPa	72000					
Thermal conductivity W/(m K)	125-140	Brazeability: Brazing with flux Brazing without flux Friction soldering Soft soldering with flux	ns ns ns ns			
Coefficient of thermal expansion (20-100 °) 10 ⁻⁶ /K	23					
Electrical conductivity MS/m	19-21					
Weldability		Machining properties				
Gas	ns	Precipitation hardened			1 70-300 Scales	
TIG	ns	Cutting speed v=m/min				
MIG	ns	Chip shape				
Resistance fusion welding	ns					

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