

STEP/G

AA 7068

## DATA SHEET

### GENERAL PROPERTIES

- Very high mechanical properties, if not the highest for available aluminium alloys
- Heat treatment to temper T76511 offers improved stress corrosion cracking resistance (B-rating) over T6511 (C-rating).
- Optimal grain structure and strength
- Good machinability in the heat treated condition (the use of oil lubricants is recommended during machining)
- Medium anodizing properties
- Corresponds to the EC Directive 2000/53/EC on end-of-life vehicles and the EC Directive 2002/95/EC (RoHS) for electrical equipment

### APPLICATION

- Products with high mechanical strength and/or high dynamic loads (i.e. structural forging parts, landing gear cylinders, ...)
- For aerospace and other high strength applications, like defense sector, machine assembly, general engineering, ...

### CHEMICAL COMPOSITION

%	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr	each	total
min	-	-	1.6	-	2.2	-	7.3	-	0.05	-	-
max	0.12	0.15	2.4	0.10	3.0	0.05	8.3	0.10	0.15	0.05	0.15

### PRODUCTION POSSIBILITIES

- ROUND, SQUARE AND FLAT BARS  
CIRCUMSCRIBED CIRCLE  
EXTRUDED: 9 – 220 mm  
DRAWN: 9 – 120 mm
- SOLID SECTIONS
- ALL TEMPERS AND STANDARDS
- INDIRECT EXTRUSION
- HEAT TREATMENT
- DRAWING, STRAIGHTENING & CHAMFERING
- STRESS RELIEVING
- ANNEALING & AGEING
- ULTRASONIC & EDDY CURRENT INSPECTION

### PHYSICAL PROPERTIES

- Modulus of elasticity: 73 GPa
- Density: 2.85 kg/dm<sup>3</sup>
- Thermal conductivity (20°C): 190 W/mK
- Thermal expansion (20-100°C): ± 23.4 µm/m.K
- Electrical conductivity (20°C):  
T6xxx: 18 MS/m  
T76xxx: 22 MS/m

### MECHANICAL PROPERTIES

Temper		R <sub>m</sub> [MPa]	R <sub>p0.2</sub> [MPa]	A5	Hardness [HB]
<b>T6511</b> Ø ≤ 76.2 mm	typical*	745	720	8	190
	min.	683	655	5	
<b>T6511</b> 76.2 < Ø ≤ 127mm	typical*	725	700	8	190
	min.	648	621	5	
<b>T6</b> 127 < Ø ≤ 165mm	typical*	700	670	8	190
	min.	634	607	5	
<b>T76511</b> Ø ≤ 76.2 mm	typical	620	580	10	180
	min.	593	552	7	
<b>T76511</b> 76.2 < Ø ≤ 127mm	typical	600	545	10	175
<b>T76</b> 127 < Ø ≤ 165mm	typical	580	520	10	160

Above mentioned typical values should not be used for design purposes. Minimum values can be optimized according to product requirements and heat treatment.