

STEP/G

EN AW 7149

DATA SHEET

GENERAL PROPERTIES

- Optimized EN AW 7049A alloy
- Very high mechanical properties
- Heat treatment to temper T73511 offers improved stress corrosion cracking resistance
- 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

PHYSICAL PROPERTIES

- Modulus of Elasticity: 71.7 GPa
- Density: 2.841 kg/dm³
- Thermal conductivity (20°C): 154 W/m.K
- Thermal expansion (20-100°C): ± 23.4 µm/m.K
- Electrical conductivity (20°C): 19 - 24 MS/m

CHEMICAL COMPOSITION

%	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	each	total
min	-	-	1.2	-	2.0	0.10	7.2	-	-	-
max	0.15	0.20	1.9	0.20	2.9	0.22	8.2	0.10	0.05	0.15

SANKYO TATEYAMA EUROPE PRODUCTION POSSIBILITIES

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

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 defence sector, machine assembly, general engineering, ...

MECHANICAL PROPERTIES

Temper		R _m [MPa]	R _{p0.2} [MPa]	A5	Hardness [HB]
T6511	typical	670	630	7	175
	minimum	610	530	5	
T73511	typical	590	540	9	165
	minimum	560	427	8	

Fracture toughness K_{IC} (20°C) in condition T73: LT direction
31-40 MPa.m^{1/2}

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