



Highly machinable alloy from Děčín

Overview & application

- Very good machinability with short chips, excellent surface quality after machining
- Good weldability and also corrosion resistance
- Suitable for hard, bright or color anodizing
- Environmentally-friendly alternative to 6262, 6012 and 6018 leaded alloys
- Suitable for automotive and electrical industry
- This alloy will stop its production & use after 2025 based on existing EU regulation (CLP, RoHS)



Product range

	Round (mm)	Hexagonal (mm)	Shaped (mm ²)	Profiles (mm ²)
Drawn	6-80	13-80	200-6400	-
Extruded	20-125	15-85	200-14400	500-9900

Chemical composition (Weight %)

	Si	Fe	Cu	Mn	Mg	Cr	Bi	Pb
Min.	0,40	-	0,15	-	0,8	0,04	0,40	0,20
Max.	0,8	0,7	0,40	0,15	1,2	0,14	0,8	0,40
Remarks	Ti max. 0,15 / Zn max. 0,25			Others: each: 0,05 / total: 0,15				

Typical tempers

T6, T8, T9

Mechanical properties

Product (Temper)	Dimension (mm)	Minimal values (EN)			Typical
		Rm (MPa)	Rp 0.2 (MPa)	A (%)	HBW (2.5/62.5)
Extruded bars (T6)	D≤125	260	240	8	-
Cold drawn bars (T8)	D≤80	345	315	4	95
Cold drawn bars (T9)	D≤80	360	330	4	95

Processing properties

Machinability	★★★★
Machining index (chips #/100g)	5500
MIG-TIG weldability	★★★
Resistance fusion weldability	★★★
Soft soldering & brazing	★★★

Protective anodising

Protective anodising	★★★★
Hard anodising	★★★

Corrosion

Corrosion resistance @ sea water	★★★
Corrosion resistance @ atmosphere	★★★★
Corrosion depth ISO 11846B (µm)	350-450



Physical properties

Density	2,72	g/cm ³
Young's modulus of elasticity	70000	MPa
Coeff. of thermal expansion (20-100°C)	23,4	x10 ⁻⁶ /°C
Thermal conductivity at 20°C	170-220	W/m*K
Specific heat capacity	895	J/kg*K
Electrical conductivity at 20°C	24-32	MS/m

Legend:

- ★★★★ Excellent
- ★★★ Good
- ★★ Acceptable
- ★ Conditional
- Not recommended

