

### Good machinable alloy from Děčín

#### Overview & application

- Medium mechanical properties, but high corrosion resistance
- No contents of lead, tin and bismuth (ELV, RoHS & REACH compatible)
- Excellent weldability, good anodizing and medium fatigue strength
- Good cold formability in T4 temper
- Applied in heavy duty structures in automotive & transport, aerospace & defense
- Alloy future lead compliant with Pb ≤ 0.1% (EU regulation under consideration for later 2020s)



#### Product range

	Round (mm)	Hexagonal (mm)	Shaped (mm <sup>2</sup> )	Profiles (mm <sup>2</sup> )
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	Zn	Ti
Min.	0,40	-	0,15	-	0,8	0,04	-	-
Max.	0,8	0,7	0,40	0,15	1,2	0,35	0,25	0,15
Remarks	Others: each: 0,05 / total: 0,15							

#### Typical tempers

T4, T6

#### Mechanical properties

Product (Temper)	Dimension (mm)	Minimal values (EN)			Typical
		Rm (MPa)	Rp 0.2 (MPa)	A (%)	HBW (2.5/62.5)
Extruded bars (T4)	D≤125	180	110	15	65
Extruded bars (T6)	D≤125	260	240	8	95
Cold drawn bars (T3)	D≤80	205	110	14	65
Cold drawn bars (T8)	D≤80	290	240	8	95

#### Processing properties

Machinability	●●●●
Machining index (chips #/100g)	2000
MIG-TIG weldability	●●●●●
Resistance fusion weldability	●●●●●
Soft soldering & brazing	●●●●

#### Protective anodising

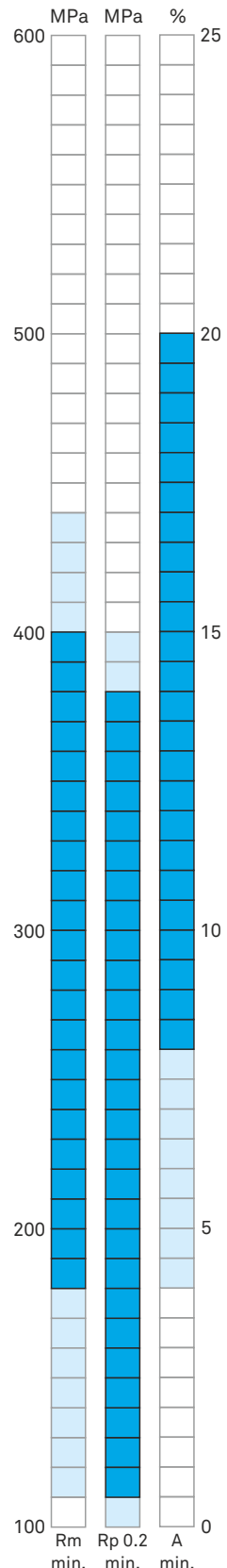
Hard anodising	●●●●●
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#### Corrosion

Corrosion resistance @ sea water	●●●●
Corrosion resistance @ atmosphere	●●●●●
Corrosion depth ISO 11846B (µm)	200-450

#### Physical properties

Density	2,70	g/cm <sup>3</sup>
Young's modulus of elasticity	70000	MPa
Coeff. of thermal expansion (20-100°C)	23	x10 <sup>-6</sup> /°C
Thermal conductivity at 20°C	170-200	W/m*K
Specific heat capacity	897	J/kg*K
Electrical conductivity at 20°C	22-30	MS/m



#### Legend:

- Excellent
- Good
- Acceptable
- Conditional
- Not recommended