



## PRODUCTION PROGRAM

Unit: mm				
Drawn	10 ÷ 76,2	To be defined	To be defined	To be defined
Extruded	30 ÷ 254	30 ÷ 165	Thick. 30 ÷ 127	-

According to EU directives:  
2000/53/EC (ELV) – 2011/65/EU (RoHS II)



## PRESENTATION

This alloy has very high mechanical properties, high fatigue strength, good forging attitude and excellent machinability on high-speed lathes.

Eural alloy 2077 is the first and only hard alloy with superior characteristics to 2024, which guarantees a chip formation comparable to 2011 and 2033, thus very high productivity, tighter tolerances, better surface roughness and longer tool life.

Eural 2077 is the best alternative to alloys 2017, 2017A, 2014, 2014A, 2024, 7020, 7022, 7075.

Due to its high properties and excellent machinability, it can replace certain types of steel and cast iron.

**Main applications:** valves, bolts and nuts, threaded bars, structural and high resistance components for aviation, automotive.

Properties	T6	T4
Machinability	Excellent	Excellent
Protective anodizing	Good	Good
Decorative anodizing	Good	Good
Hard anodizing	Good	Good
Resistance to atmospheric corrosion	Good	Good
Resistance to marine corrosion	Acceptable	Acceptable
MIG-TIG weldability	Good	Good
At resistance weldability	Acceptable	Acceptable
Brazing weldability	Good	Good
Plastic formability when cold	Acceptable	Acceptable
Plastic formability when hot	Acceptable	Acceptable

### Legend



Chemical composition	
Si	0,40 ÷ 1,00
Fe	≤ 0,70
Cu	4,00 ÷ 5,00
Mn	0,60 ÷ 1,20
Mg	0,60 ÷ 1,20
Cr	≤ 0,20
Ni	≤ 0,20
Zn	≤ 0,25
Ti	≤ 0,15
Ag, Li, Zr	Each ≤ 0,15
Bi	0,20 ÷ 0,90
Others	Each 0,05 Tot. 0,15
Al	Remainder

Physical properties	
Density	$\frac{Kg}{dm^3}$ 2,81
Modulus of elasticity	MPa 70.000
Coefficient of thermal expansion	$\frac{x10^{-6}}{^{\circ}C}$ 22,9
Thermal conductivity at 20°C	$\frac{W}{mk}$ T6: 151 T4: 171
Electrical resistivity at 20°C	$\frac{\Omega mm^2}{m}$ T6: 0.038 T4: 0.043

Minimum mechanical properties						
		Diam. mm.	Rm MPa	Rp 0,2 MPa	A%	HBW*
Drawn	T6 / T651	≤ 80	480	400	5	130
	T4 / T4511	≤ 75	400	270	10	105
Extruded	T4 / T4511	75<D≤150	390	260	9	105
	T4 / T4511	150<D≤200	370	240	8	105
	T4 / T4511	200<D≤254	360	220	7	105
	T6 / T6511	≤ 150	455	380	5	130
	T6 / T6511	150<D≤200	420	280	8	120
	T6 / T6511	200<D≤254	400	270	8	110

\*HBW only for indicative purposes