



# Alloy 2024 by nissal newmet

According to EU directives: 2000/53/CE (ELV) - 2011/65/EU (RoHS II)

Color code EU **ORANGE**

PRODUCTION PROGRAM			
Unit:mm			
Drawn	10 ÷ 65	10 ÷ 36	20 ÷ 36
Extruded	20 ÷ 120	20 ÷ 36	20 ÷ 36

Alloy 2024 has high mechanical properties and excellent resistance to fatigue. During machining, it creates quite long chips, therefore it is not well suited for automatic lathes. Alloy 2024 offers excellent toughness at moderately high strength levels. With good strength and fatigue resistance, and improved fracture toughness, the alloy is specified by the aerospace sector and the military. Also aluminum 2024 alloy is used in the manufacture of rivets, connectors, hydraulic valve and scientific instruments. Main applications: screws, bolts, nuts, threaded bars.

## CHEMICAL COMPOSITION

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb	Bi	Other	Al
≤0.50	≤0.50	3.8+4.9	0.3+0.9	1.2+1.8	≤0.10		≤0.25	≤0.15			Each 0.05 Total 0.15	Remainder

## PHYSICAL PROPERTIES

Density	$\frac{\text{Kg}}{\text{dm}^3}$	2.79
Modules of elasticity	MPa	70.000
Coefficient of thermal expansion	$\frac{\times 10^{-6}}{^{\circ}\text{C}}$	23.1
Thermal conductivity at 20°C	$\frac{\text{W}}{\text{mk}}$	120
Typical electrical resistivity at 20°C	$\frac{\Omega\text{mm}^2}{\text{m}}$	0.057

## MECHANICAL PROPERTIES

	Temper	Diam mm	Rm Mpa	Rp Mpa	A%	HBW Typical
Drawn	T3	10<D≤50	425	290	9	120
	T351	≤80	425	310	8	120
	T6	≤80	425	315	5	125
	T651	≤80	425	315	4	125
	T8	≤80	455	400	4	130
Extruded	T851	≤80	455	400	2	130
	T3,T3510,T3511	≤50	450	310	8	120
	T3,T3510,T3511	50<D≤100	440	300	8	120
	T3,T3510,T3511	100<D≤200	420	280	8	120
	T3,T3510,T3511	200<D≤250	400	270	8	120
T8,T8510,T8511	≤150	455	380	5	120	

## PROPERTIES

	T3			
Mechinability				
Protective anodizing				
Decoratice anodizing				
Hard anodizing				
Resistance to atmospheric corrosion				
Resistance to marine corrosion				
MIG-TIG weldability				
At resistance weldability				
Brazing weldability				
Plastic farmability when cold				
Plastic farmability when hot				

Legend

Excellent
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Good
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Acceptable
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Not recommended
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