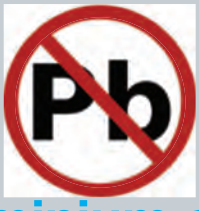
6026LF by EURAL

Lead Free



Aluminium alloy

EURAL GNUTTI S.p.A.

According to
RoHS II, ELV, REACH directives
actual and future revisions

Application fields

6026LF by EURAL is extremely versatile, due to its medium-high mechanical properties, good attitude to anodizing, good weldability, good attitude to forging, good corrosion resistance.
6026LF by EURAL is suitable for components used in several industries as automotive, electric and electronic, valves, oleohydraulic, pneumatic, defence.

Ecological choice

Since many years, the European Community is working on reducing the content of hazardous substances.
Actual revisions of RoHS, ELV, REACH directives limit the content of Pb to max 0.40% on aluminium alloys, and the tendency for the future is to revise this limit to be lead free.
Eural Gnutti has anticipated the future restrictions of such directives creating the 6026LF by EURAL Lead Free.

The birth of 6026LF by EURAL

6026LF by EURAL is an innovative alloy designed and developed by Eural Gnutti S.p.A. R&D laboratories in order to meet the strictest requirements in critical automotive applications such as brake systems.

High machinability

6026LF by EURAL is particularly suitable for being machined on high speed automatic lathes due to extremely good chip

No tin

On many alloys of 6000 series lead (Pb) has been replaced with tin (Sn) which, as it has been proved, causes weakness and cracking of the machined parts when submitted to stress and high temperature (284°F).
Due to its brittle nature, tin has the dangerous tendency to suddenly break without significant previous deformation (strain).
6026LF by EURAL does not contain tin.

Ultrasonic tested billets

All semi-finished products in 6026LF by EURAL are made of 100% ultrasonic tested billets according to **SAE AMS-STD-2154 class A.**

Production program

6026LF by EURAL is available in drawn or extruded conditions.
Drawn round bars from 6 to 76,2 mm, temper T6, T8 or T9.
Extruded round bars from 30 to 254 mm, temper T6.
Square, rectangular, hexagonal bars are available.
A wide range of drawn bars are also available in h9 tolerance.

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Alternative to:

6026LF by EURAL is the best alternative to several aluminium alloys such as 2007, 2011, 2015, 2028, 2030, 2044, 6012, 6012A, 6020, 6021, 6023, 6028, 6033, 6040, 6041, 6042, 6061, 6065, 6082, 6262, 6064A, 6262A, 6351, 7020.
6026LF by EURAL is an excellent replacement of brass, due to its good machinability, good attitude to forging, medium-high mechanical properties. Moreover, since 6026LF by EURAL has a specific gravity of 1/3 compared to brass, it results extremely convenient costwise.

Compatibility in drawings

6026LF by EURAL was born on 2002, and it has been registered to the Aluminum Association and to EN standards with a lead content of Pb ≤ 0,40.
Therefore, 6026LF by EURAL does not need any variations in drawings where 6026 is already indicated.

Lead (Pb) and tin (Sn) can be present as traces, within the limit of 0,05%, as prescribed by international regulations.

6026LF by EURAL

Lead Free

Colour code
EU white

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬢
Drawn	6 ÷ 76,2	10 ÷ 65	Spess. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Spess. 30 ÷ 157	–

PRESENTATION

This innovative alloy has been conceived and developed in Eural Gnutti SpA's research laboratories, in order to meet the most recent standards for the protection of the environment, removing lead. It is particularly suitable for being machined on high speed automatic lathes. It has good resistance to corrosion, medium-high mechanical properties, good suitability for decorative and industrial hard anodizing. It is also used for hot forging purposes.
Eural 6026LF alloy does not contain tin (Sn) which, as it has been proved, causes weakness and cracking of the machined parts when submitted to stress and high temperature.
Due to its brittle nature, tin has the dangerous tendency to suddenly break without significant previous deformation (strain).
It can replace 2007, 2011, 2015, 2028, 2030, 2044, 6012, 6012A, 6020, 6021, 6023, 6028, 6033, 6040, 6041, 6042, 6061, 6065, 6082, 6262, 6064A, 6262A, 6351, 7020 alloys.

Main applications: automotive industry, electric and electronic industry, hot forging, screws, bolts, nuts, threaded parts.

Samples of finished products made of Eural bars

Properties	T6	T8/T9
Machinability		
Protective anodizing		
Decorative anodizing		
Hard anodizing		
Resistance to atmospheric corrosion		
Resistance to marine corrosion		
MIG-TIG weldability		
At resistance weldability		
Brazing weldability		
Plastic formability when cold		
Plastic formability when hot		

Legenda: Excellent · Good · Acceptable · Not recommended

Chemical composition	
Si	0,60 ÷ 1,40
Fe	≤ 0,70
Cu	0,20 ÷ 0,50
Mn	0,20 ÷ 1,00
Mg	0,60 ÷ 1,20
Cr	≤ 0,30
Ni	
Zn	≤ 0,30
Ti	≤ 0,20
Sn	≤ 0,05
Pb	≤ 0,05* (traces)
Bi	0,50 ÷ 1,50
Others	Each 0,05 Total 0,15
Al	Remainder

**6026 is registered with Pb ≤ 0,40*

Physical properties		
Density	Kg/dm³	2,72
Modulus of elasticity	MPa	69.000
Coefficient of thermal expansion	x10⁻⁶/°C	23,4
Thermal conductivity at 20°C	W/mk	172
Typical electrical resistivity at 20°C	Ω mm²/m	0,039

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Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	370	300	8	95
	T8	≤ 80	345	315	4	95
	T9	≤ 80	360	330	4	95
Extruded	T6	≤ 140	370	300	8	95
	T6	140 < D ≤ 200	340	250	8	90
	T6	200 < D ≤ 250	300	200	8	90

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