6026 by EURAL
LEAD FREE

FREE CUTTING
Aluminium alloy

EURAL
GNUTTI S.p.A.

According to
RoHS II, ELV, REACH directives

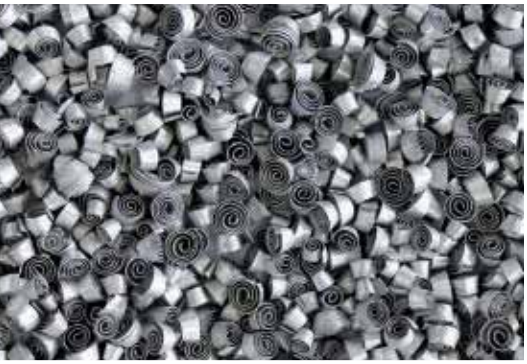
Application fields
6026 LEAD FREE by EURAL is extremely versatile, due to its medium-high mechanical properties, good attitude to anodizing, good weldability, good attitude to forging, good corrosion resistance.
6026 LEAD FREE by EURAL is suitable for components used in several industries as automotive,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

Ecological choice
Since many years, the European Community is working on reducing the content of hazardous substances.
The latest directive RoHS (2018/740/EU) and REACH fix the limit of lead (Pb) in aluminium alloy to 0,1% starting from 18/05/2021 (previously it was 0,4%).
Eural Gnutti has anticipated future restrictions of such directives creating the alloy 6026 LEAD FREE by EURAL.

The birth of 6026 LEAD FREE by EURAL

6026 LEAD FREE 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
6026 LEAD FREE by EURAL is particularly suitable for being machined on high speed automatic lathes due to extremely good chip forming.



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 (>160°C / 320°F).
Due to its brittle nature, tin has the dangerous tendency to suddenly break without significant previous deformation (strain).
6026 LEAD FREE by EURAL does not contain tin.

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

Production program
6026 LEAD FREE 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.

Alternative to:
6026 LEAD FREE 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.
6026 LEAD FREE by EURAL is an excellent replacement of brass, due to its good machinability, good attitude to forging, medium-high mechanical properties. Moreover, since 6026 LEAD FREE by EURAL has a specific gravity of 1/3 compared to brass, it results extremely convenient costwise.

Compatibility in drawings
6026 LEAD FREE 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 ≤ 0,4%.
Therefore, 6026 LEAD FREE 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.

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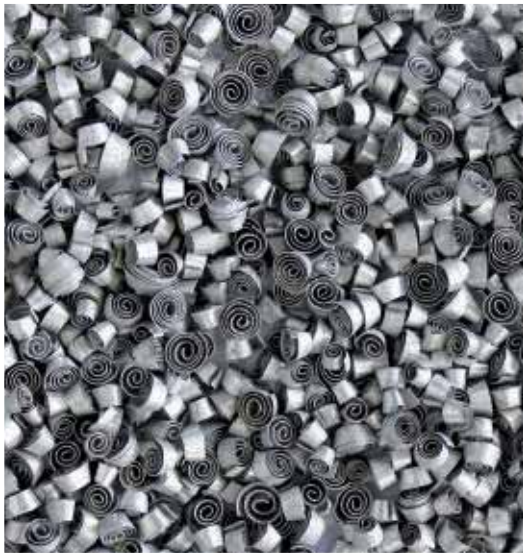
6026 by EURAL LEAD FREE

Colour code
EU white

PRODUCTION PROGRAM

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

According to EU directives:
2000/53/EU (ELV) - 2018/740/EU (RoHS II)



PRESENTATION

Alloy 6026 LEAD FREE is the best option for machinability since recent limitations by RoHS (2018/740/EU) and REACH on lead content allowance (Pb ≤ 0,1%). It is particularly suitable for being machined on high-speed automatic lathes. 6026 LEAD FREE offers:

- Excellent chip forming performance
- Good attitude to anodizing, big thickness also
- Good corrosion resistance
- Excellent surface finishing (low roughness)
- Good for forging

It is definitely a better solution than aluminium+Tin (Sn) alloys because free from any limitations on possible application (final parts subjected to high stress, low or high temperatures). 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.

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	■■■□	■■■□

Legend

■■■■ Excellent ■■■□ Good ■■□□ Acceptable ■□□□ Not recommended

Samples of finished products made of Eural bars

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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Minimum 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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