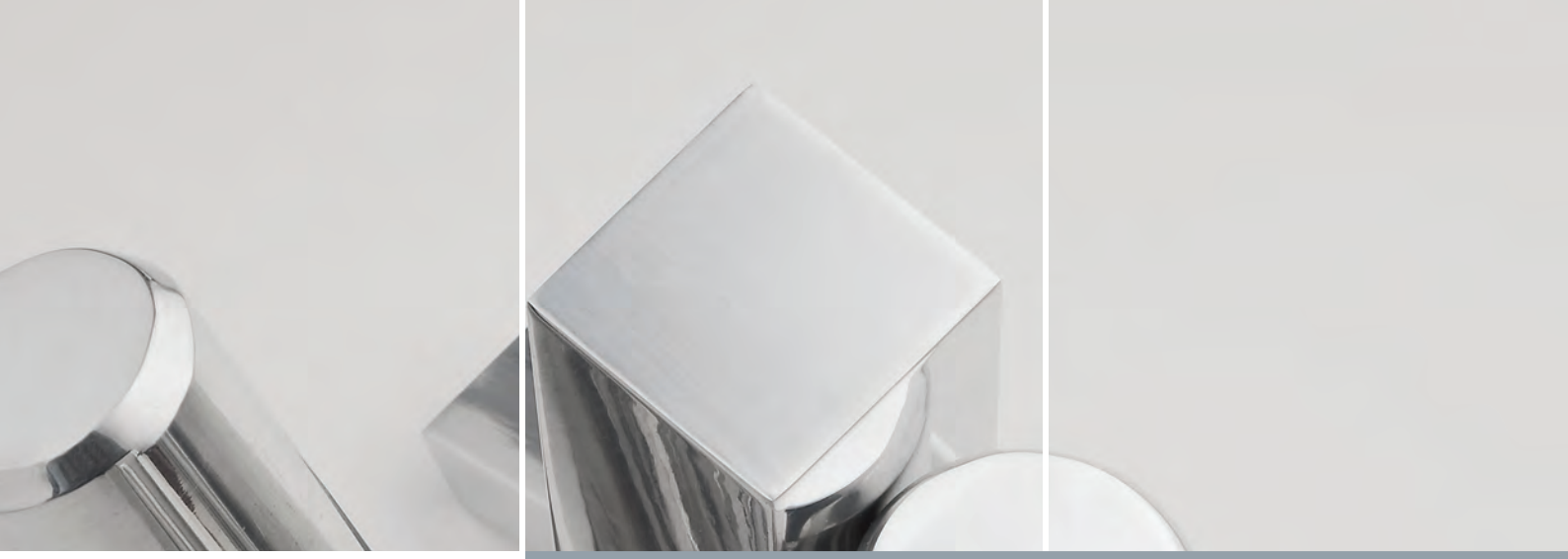
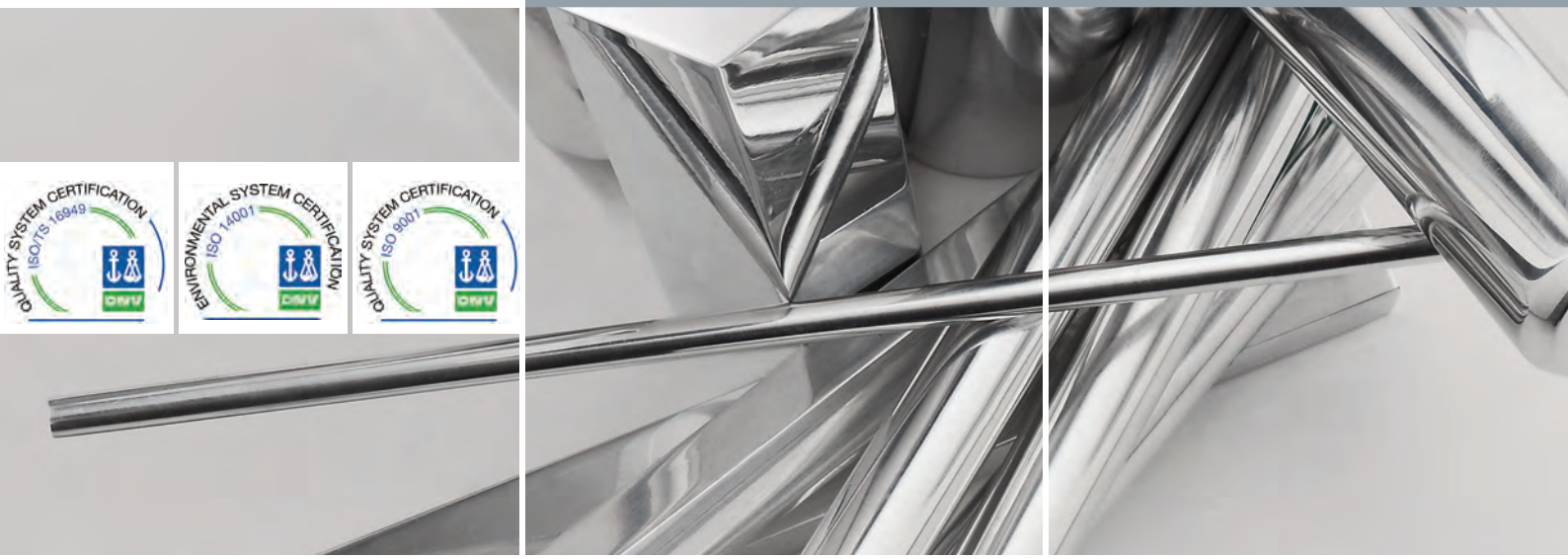


EURAL GNUTTI S.p.A.

Aluminium Bars



Dear Customer,

Since 1968, our company has manufactured semis in aluminium and occupied a position of worldwide leadership in bars and rods. Our production facilities include the foundry located in Pontevico, Brescia (Italy) and the extrusion plant in Rovato, Brescia (Italy). With a workforce of about 400 employees and built on an area covering a total of 400.000 sq.m., Eural possesses the latest state-of-the-art foundry and extrusion equipment.

Our passion for our job pushes us to always achieve excellence for our products. We constantly invest in research and development and in the latest technologies so our customers receive the maximum for their applications.
The choice of the correct alloy is a crucial passage that might determine the success of a product. For this reason, we have produced this catalogue that gives you for each alloy a detailed technical sheet with all the parameters you need.
International standards leave the manufacturers too wide a margin of variability for creating each alloy. In practice this means that, for each alloy, you can face significant differences in mechanical properties, with not always acceptable results on your final products. In Eural we have generated a code that is more stringent than the international regulations and restricts further the oscillations within the same alloy, constantly guaranteeing you homogeneous products in the course of time, to always get the best mechanical properties.

We received in 2008 the certification ISO/TS 16949.2002 that guarantees an extremely high quality system, and we have already implemented a modern automatic system of ultrasonic tests that certifies the absolute integrity of each and every billet that we produce in our foundry, according to class "A" of SAE AMS-STD-2154 regulation. In Eural each production process is subject to quality controls, which go beyond standard requirements.

We firmly believe that the dialogue with you, through our technical and commercial staff, is fundamental to support you in the choice of the aluminium alloy that best suits to your needs. You can always count on our experience and our availability.

Dott. Sergio Gnutti
President Eural Gnutti S.p.A.

2011 by EURAL

Colour code
EU red

Colour code
USA brown

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	5 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	30 ÷ 165	Thick. 30 ÷ 127	–

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

PRESENTATION

This alloy is the most often selected for high speed automatic lathes.
It offers the following advantages:
- easy machining with any equipment;
- cutting stress lower than most of other alloys;
- longer life of cutting tools;
- cutting area always clean due to very thin chip;
- high mechanical properties;
- possibility to anodize finished parts in several colours *.

Main applications: screws, bolts, nuts, threaded bars.

* To get an optimal surface finishing of anodized pieces, we suggest use suitable lubricants during machining.

Samples of finished products made of Eural bars

Properties	T3/T6	T8
Machinability	Excellent	Excellent
Protective anodizing	Good	Good
Decorative anodizing	Acceptable	Acceptable
Hard anodizing	Acceptable	Acceptable
Resistance to atmospheric corrosion	Good	Good
Resistance to marine corrosion	Acceptable	Acceptable
MIG-TIG weldability	Acceptable	Acceptable
At resistance weldability	Acceptable	Acceptable
Brazing weldability	Acceptable	Acceptable
Plastic formability when cold	Good	Acceptable
Plastic formability when hot	Good	Good

Legend

Excellent | Good | Acceptable | Not recommended

Chemical composition	
Si	≤ 0,40
Fe	≤ 0,70
Cu	5,00 ÷ 6,00
Mn	
Mg	
Cr	
Ni	
Zn	≤ 0,30
Ti	
Pb	0,20 ÷ 0,40
Bi	0,20 ÷ 0,60
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,83
Modulus of elasticity	MPa	70.000
Coefficient of thermal expansion	x10⁻⁶ / °C	22,9
Thermal conductivity at 20°C	W / mk	T3: 151 / T8: 171
Typical electrical resistivity at 20°C	Ω mm² / m	T3: 0.038 / T8: 0.043

www.eural.com

Mechanical properties			Rm	Rp0,2		HBW
	Temper	Diam. mm	MPa	MPa	A%	Typical
Drawn	T3	≤ 40	320	270	10	90
	T3	40 < D ≤ 50	300	250	10	90
	T3	50 < D ≤ 80	280	210	10	90
	T8	≤ 80	370	270	8	115
Extruded	T6	≤ 75	310	230	8	110
	T6	75 < D ≤ 200	295	195	6	110

MD70201.02 GB REV 07 03/11/16

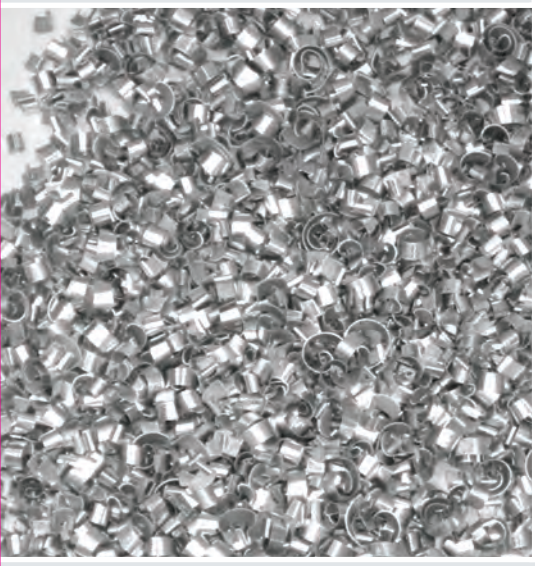
2007 by EURAL

Colour code
EU black

EURAL GNUTTI S.p.A.

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬢
Drawn	14 ÷ 76,2	20 ÷ 65	Thick. 12 ÷ 55	20 ÷ 63,5
Extruded	30 ÷ 254	30 ÷ 165	Thick. 30 ÷ 127	–



PRESENTATION

Among aluminium alloys for high speed automatic lathes, 2030 and 2007 have the highest mechanical characteristics.
This alloy is the most often selected when it is required to have a good combination of machinability and high mechanical properties. It has low corrosion resistance.

Main applications: screws, bolts, nuts, threaded bars.

Samples of finished products made of Eural bars

Properties	T3/T4
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

Chemical composition	
Si	≤ 0,80
Fe	≤ 0,80
Cu	3,30 ÷ 4,60
Mn	0,50 ÷ 1,00
Mg	0,40 ÷ 1,80
Cr	≤ 0,10
Ni	≤ 0,20
Zn	≤ 0,80
Ti	≤ 0,20
Pb	0,80 ÷ 1,00
Bi	≤ 0,20
Sn	≤ 0,20
Others	Each 0,10 Total 0,30
Al	Remainder

Physical properties		
Density	Kg / dm³	2,85
Modulus of elasticity	MPa	71.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,5
Thermal conductivity at 20°C	W / mk	140
Typical electrical resistivity at 20°C	Ω mm² / m	0,057

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T3	≤ 30	370	240	7	95
	T3	30 < D ≤ 80	340	220	6	95
	T351	≤ 80	370	240	5	95
Extruded	T4, T4510, T4511	≤ 80	370	250	8	95
	T4, T4510, T4511	80 < D ≤ 200	340	220	8	95
	T4, T4510, T4511	200 < D ≤ 250	330	210	7	95

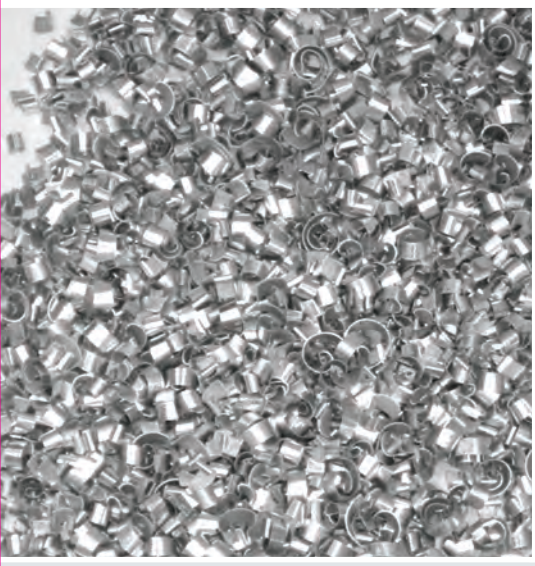
MD70201.02 GB REV 07 03/11/16

2030 by EURAL

Colour code
EU black

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	14 ÷ 76,2	20 ÷ 65	Thick. 12 ÷ 55	20 ÷ 63,5
Extruded	30 ÷ 254	30 ÷ 165	Thick. 30 ÷ 127	–



PRESENTATION

Among aluminium alloys for high speed automatic lathes, 2030 and 2007 have the highest mechanical characteristics.
This alloy is the most often selected when it is required to have a good combination of machinability and high mechanical properties. It has low corrosion resistance.

Main applications: screws, bolts, nuts, threaded bars.

Samples of finished products made of Eural bars

Properties	T3/T4
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

Chemical composition	
Si	≤ 0,80
Fe	≤ 0,70
Cu	3,30 ÷ 4,50
Mn	0,20 ÷ 1,00
Mg	0,50 ÷ 1,30
Cr	≤ 0,10
Ni	
Zn	≤ 0,50
Ti	≤ 0,20
Pb	0,80 ÷ 1,00
Bi	≤ 0,20
Others	Each 0,10 Total 0,30
Al	Remainder

Physical properties		
Density	Kg / dm³	2,85
Modulus of elasticity	MPa	71.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,5
Thermal conductivity at 20°C	W / mk	140
Typical electrical resistivity at 20°C	Ω mm² / m	0,057

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T3	≤ 30	370	240	7	115
	T3	30 < D ≤ 80	340	220	6	115
	T351	≤ 80	370	240	5	115
Extruded	T4, T4510, T4511	≤ 80	370	250	8	115
	T4, T4510, T4511	80 < D ≤ 200	340	220	8	115
	T4, T4510, T4511	200 < D ≤ 250	330	210	7	115

MD70201.02 GB REV 07 03/11/16

2017A by EURAL

Colour code
EU green

EURAL GNUTTI S.p.A.

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	14 ÷ 76,2	20 ÷ 65	Thick. 12 ÷ 55	20 ÷ 63,5
Extruded	30 ÷ 254	30 ÷ 165	Thick. 30 ÷ 127	–

PRESENTATION

This alloy 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.
It can be replaced by 2030, which has the same mechanical properties but has better machinability, allowing higher productivity.

Main applications: screws and bolts, high structural resistance components for aviation and defense.

Samples of finished products made of Eural bars

Properties	T3/T4
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

Chemical composition	
Si	0,20 ÷ 0,80
Fe	≤ 0,70
Cu	3,50 ÷ 4,50
Mn	0,40 ÷ 1,00
Mg	0,40 ÷ 1,00
Cr	≤ 0,10
Ni	
Zn	≤ 0,25
Zr+Ti	≤ 0,25
Pb	
Bi	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,79
Modulus of elasticity	MPa	75.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,6
Thermal conductivity at 20°C	W / mk	134
Typical electrical resistivity at 20°C	Ω mm² / m	0,051

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T3	≤ 80	400	250	10	105
	T351	≤ 80	400	250	8	105
Extruded	T4, T4510, T4511	≤ 75	400	270	10	105
	T4, T4510, T4511	75 < D ≤ 150	390	260	9	105
	T4, T4510, T4511	150 < D ≤ 200	370	240	8	105
	T4, T4510, T4511	200 < D ≤ 250	360	220	7	105

MD70201.02 GB REV 07 03/11/16

2024 by EURAL

Colour code
EU red

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	20 ÷ 76,2	–	–	–
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

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

PRESENTATION

This alloy 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.

Main applications: screws and bolts, high structural resistance components for aviation and defense.

Samples of finished products made of Eural bars

Properties	T3
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

Chemical composition	
Si	≤ 0,50
Fe	≤ 0,50
Cu	3,80 ÷ 4,90
Mn	0,30 ÷ 0,90
Mg	1,20 ÷ 1,80
Cr	≤ 0,10
Ni	
Zn	≤ 0,25
Ti	≤ 0,15
Pb	
Bi	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,79
Modulus of elasticity	MPa	70.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,1
Thermal conductivity at 20°C	W / mk	120
Typical electrical resistivity at 20°C	Ω mm² / m	0,057

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T3	10 < D ≤ 80	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
	T851	≤ 80	455	400	3	130
Extruded	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	130

MD70201.02 GB REV 07 03/11/16

2014 by EURAL

Colour code
Gray

EURAL GNUTTI S.p.A.

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬢
Drawn	14 ÷ 76,2	20 ÷ 65	Spess. 12 ÷ 55	20 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Spess. 30 ÷ 127	–

PRESENTATION

This alloy has high mechanical properties, excellent resistance to fatigue, good attitude to forging and a fair machinability.

Main applications: high structural resistance components for aircraft and defense.

Samples of finished products made of Eural bars

Properties	T3/T4/T6
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	0,50 ÷ 1,20
Fe	≤ 0,70
Cu	3,90 ÷ 5,00
Mn	0,40 ÷ 1,20
Mg	0,20 ÷ 0,80
Cr	≤ 0,10
Ni	
Zn	≤ 0,25
Ti	≤ 0,15
Pb	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,80
Modulus of elasticity	MPa	72.400
Coefficient of thermal expansion	x10⁻⁶ / °C	23
Thermal conductivity at 20°C	W / mk	T4: 134 T6: 155
Typical electrical resistivity at 20°C	Ω mm² / m	T4: 0,051 T6: 0,043

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Extruded	T3	≤ 80	380	290	8	110
	T351	≤ 80	380	290	6	110
	T4	≤ 80	380	220	12	110
	T451	≤ 80	380	220	10	110
	T6	≤ 80	450	380	8	140
	T651	≤ 80	450	380	6	140
Extruded	T4, T4510, T4511	≤ 75	410	270	12	110
	T4, T4510, T4511	75 < D ≤ 150	390	250	10	110
	T4, T4510, T4511	150 < D ≤ 200	350	230	8	110
	T6, T6510, T6511	≤ 75	460	415	7	140
	T6, T6510, T6511	75 < D ≤ 150	465	420	7	140
	T6, T6510, T6511	150 < D ≤ 200	430	350	6	140
	T6, T6510, T6511	200 < D ≤ 250	420	320	5	140

MD70201.02 GB REV 07 03/11/16

2014A by EURAL

Colour code
Brown

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	14 ÷ 76,2	20 ÷ 65	Spess. 12 ÷ 55	20 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Spess. 30 ÷ 127	–

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

PRESENTATION

This alloy has high mechanical properties, excellent resistance to fatigue, good attitude to forging and a fair machinability.

2014A by Eural can also be made according to aerospace BS L168 standard, which requires higher mechanical properties compared to traditional EN standards. This version is available only for extruded bars in T6511 temper, from diameter 30 mm up to 152,4 mm.

Main applications: High structural resistance components for aircraft and defense.

Samples of finished products made of Eural bars

Properties	T3/T4/T6
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	0,50 ÷ 0,90
Fe	≤ 0,50
Cu	3,90 ÷ 5,00
Mn	0,40 ÷ 1,20
Mg	0,20 ÷ 0,80
Cr	≤ 0,10
Ni	≤ 0,10
Zn	≤ 0,25
Ti	≤ 0,15
Pb	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg/dm³	2,80
Modulus of elasticity	MPa	72.400
Coefficient of thermal expansion	x10⁻⁶/°C	23
Thermal conductivity at 20°C	W/mk	T6: 155
Typical electrical resistivity at 20°C	Ω mm²/m	T6: 0,043

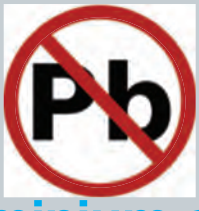
www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T3	≤ 80	380	290	8	110
	T351	≤ 80	380	290	6	110
	T4	≤ 80	380	220	12	110
	T451	≤ 80	380	220	10	110
	T6	≤ 80	450	380	8	140
	T651	≤ 80	450	380	6	140
Extruded	T4, T4510, T4511	≤ 75	410	270	12	110
	T4, T4510, T4511	75 < D ≤ 150	390	250	10	110
	T4, T4510, T4511	150 < D ≤ 200	350	230	8	110
	T6, T6510, T6511	≤ 75	460	415	7	140
	T6, T6510, T6511	75 < D ≤ 150	465	420	7	140
	T6, T6510, T6511	150 < D ≤ 200	430	350	6	140
	T6, T6510, T6511	200 < D ≤ 250	420	320	5	140
BSL168 Extruded	T6, T6510, T6511	≤ 75	490	440	7	-
	T6, T6510, T6511	75 < D ≤ 100	480	435	7	-
	T6, T6510, T6511	100 < D ≤ 150	465	420	7	-
	T6, T6510, T6511	150 < D ≤ 200	435	390	7	-

MD70201.02 GB REV 07 03/11/16

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.

www.eural.com

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

www.eural.com

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

MD70201.02 GB REV 07 03/11/16

6026 by EURAL

Colour code
EU orange

EURAL GNUTTI S.p.A.

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬢
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

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. 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 6026 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. It can replace 6061, 6082, 6064A, 6042, 6262, 6012, 2007, 2030 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	■■■□	■■■□

Legend

■■■□ 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	≤ 0,40
Bi	0,50 ÷ 1,50
Others	Each 0,05 Total 0,15
Al	Remainder

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

www.eural.com

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

MD70201.02 GB REV 07 03/11/16

6064A by EURAL

Colour code
EU yellow

Colour code
USA orange

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

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

PRESENTATION

This alloy has good machinability and high mechanical properties. Moreover it has good resistance to corrosion and suitability to hard, protective and decorative anodizing.

Main applications: particulars for braking systems for automotive, structural components for civil constructions, railroad and heavy street vehicles.

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	■■■□	■■■□

Legend

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

Chemical composition	
Si	0,40 ÷ 0,80
Fe	≤ 0,70
Cu	0,15 ÷ 0,40
Mn	≤ 0,15
Mg	0,80 ÷ 1,20
Cr	0,04 ÷ 0,14
Ni	
Zn	≤ 0,25
Ti	≤ 0,15
Pb	0,20 ÷ 0,40
Bi	0,40 ÷ 0,80
Others	Each 0,05 Total 0,15
Al	Remainder

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

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	310	260	8	95
	T8	≤ 80	345	315	4	95
	T9	≤ 80	360	330	4	95
Extruded	T6, T6510, T6511	≤ 140	310	260	8	95
	T6, T6510, T6511	140 < D ≤ 250	260	240	8	90

MD70201.02 GB REV 07 03/11/16

6262 by EURAL

Colour code
EU yellow

Colour code
USA orange

EURAL GNUTTI S.p.A.

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬢
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

PRESENTATION

This alloy has good machinability and high mechanical characteristics. Moreover, it has good resistance to corrosion and suitability to hard, protective and decorative anodizing.

Main applications: structural components for civil constructions, railroad and street heavy vehicles.

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		

Legend

Excellent | Good | Acceptable | Not recommended

Chemical composition	
Si	0,40 ÷ 0,80
Fe	≤ 0,70
Cu	0,15 ÷ 0,40
Mn	≤ 0,15
Mg	0,80 ÷ 1,20
Cr	0,04 ÷ 0,14
Ni	
Zn	≤ 0,25
Ti	≤ 0,15
Pb	0,40 ÷ 0,70
Bi	0,40 ÷ 0,70
Others	Each 0,05 Total 0,15
Al	Remainder

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	0,038

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	290	240	10	85
	T8	≤ 50	345	315	4	-
	T9	≤ 50	360	330	4	-
Extruded	T6	≤ 200	260	240	10	75

MD70201.02 GB REV 07 03/11/16

6262A by EURAL

Colour code
EU green

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

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

PRESENTATION

This is an ecologic alloy, it does not have lead, it has good machinability and high mechanical characteristics. Moreover, it has a good resistance to corrosion and suitability to hard, protective and decorative anodizing.
It is an alternative to 6012, 6262, 6020, 6023 alloys.

Main applications: machining on high-speed automatic lathes, particulars for automotive applications, automatic transmission shafts, valves and clutches, hydraulic parts.

NOTE: it is particularly suitable for the realization of parts not subject to extreme heat solicitations (max 140°C) and therefore it is appropriate for automotive parts as automatic transmission shafts. For higher temperatures, we suggest to use other Eural alloys, as 6026 or 6064A.

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		

Legend

Excellent | Good | Acceptable | Not recommended

Chemical composition	
Si	0,40 ÷ 0,80
Fe	≤ 0,70
Cu	0,15 ÷ 0,40
Mn	≤ 0,15
Mg	0,80 ÷ 1,20
Cr	0,04 ÷ 0,14
Ni	
Zn	≤ 0,25
Ti	≤ 0,10
Bi	0,40 ÷ 0,90
Sn	0,40 ÷ 1,00
Others	Each 0,05 Total 0,15
Al	Remainder

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	0,038

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	290	240	10	-
	T8	≤ 50	345	315	4	-
	T9	≤ 50	360	330	4	-
Extruded	T6	≤ 220	260	240	10	75

MD70201.02 GB REV 07 03/11/16

6082 by EURAL

Colour code
EU turquoise

EURAL GNUTTI S.p.A.

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	20 ÷ 165	Thick. 10 ÷ 127	–

PRESENTATION

This alloy has medium mechanical properties, but high resistance to corrosion and excellent attitude to weldability, hot forging and anodizing.

Main applications: highly stressed structural parts for ground and nautical means of transport, anti-impact lateral bars, door frame, space frame and sub frame for cars, hydraulic systems, stairs and scaffoldings, platforms, screws and rivets, particulars for nuclear plants, food industry.

Samples of finished products made of Eural bars

Properties	T6
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

Chemical composition	
Si	0,70 ÷ 1,30
Fe	≤ 0,50
Cu	≤ 0,10
Mn	0,40 ÷ 1,00
Mg	0,60 ÷ 1,20
Cr	≤ 0,25
Ni	
Zn	≤ 0,20
Ti	≤ 0,10
Pb	
Bi	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,71
Modulus of elasticity	MPa	69.000
Coefficient of thermal expansion	x10⁻⁶ / °C	24
Thermal conductivity at 20°C	W / mk	167
Typical electrical resistivity at 20°C	Ω mm² / m	0,037

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	310	255	10	95
Extruded	T6	≤ 150	310	260	8	95
	T6	150 < D ≤ 200	280	240	6	95
	T6	200 < D ≤ 250	270	200	6	95

MD70201.02 GB REV 07 03/11/16

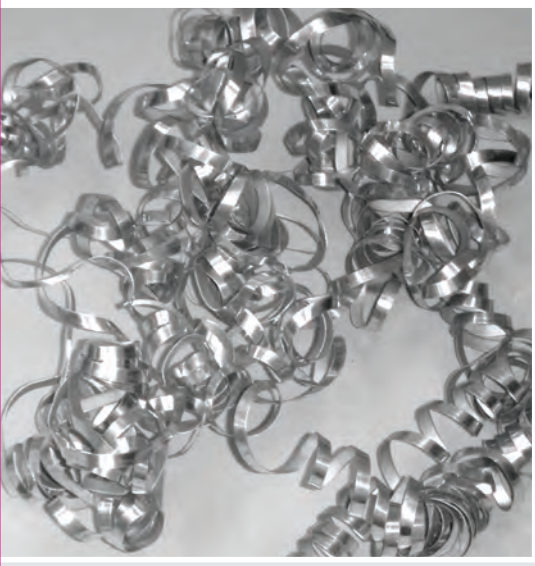
6061 by EURAL

Colour code
EU blue

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	6 ÷ 76,2	10 ÷ 65	Thick. 12 ÷ 55	10 ÷ 63,5
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

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



PRESENTATION

This alloy has medium mechanical properties, but high resistance to corrosion and excellent attitude to weldability, hot forging and anodizing.

Main applications: highly stressed structural parts for ground and nautical means of transport, anti-impact lateral bars, door frame, space frame and sub frame for cars, hydraulic systems, stairs and scaffoldings, platforms, screws and rivets, particulars for nuclear plants, food industry.

Samples of finished products made of Eural bars

Properties	T6
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

Chemical composition	
Si	0,40 ÷ 0,80
Fe	≤ 0,70
Cu	0,15 ÷ 0,40
Mn	≤ 0,15
Mg	0,80 ÷ 1,20
Cr	0,04 ÷ 0,35
Ni	
Zn	≤ 0,25
Ti	≤ 0,15
Pb	
Bi	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,71
Modulus of elasticity	MPa	69.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,5
Thermal conductivity at 20°C	W / mk	173
Typical electrical resistivity at 20°C	Ω mm² / m	0,037

www.eural.com

Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	290	240	10	95
Extruded	T6	≤ 200	260	240	8	95

MD70201.02 GB REV 07 03/11/16

7075 by EURAL

Colour code
EU violet

Colour code
USA black

EURAL GNUTTI S.p.A.

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

PRODUCTION PROGRAM

Unit: mm	●	■	▬	⬣
Drawn	25 ÷ 76,2	–	–	–
Extruded	30 ÷ 254	50 ÷ 165	Thick. 30 ÷ 127	–

PRESENTATION

This alloy has extremely high mechanical properties and high resistance to fatigue. Moreover, it has good resistance to corrosion and attitude to hard, protective and decorative anodizing.

Main applications: high resistance structural parts for mechanical industry, aviation, defense, motorbike and automotive.

Samples of finished products made of Eural bars

Properties	T6
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

Chemical composition	
Si	≤ 0,40
Fe	≤ 0,50
Cu	1,20 ÷ 2,00
Mn	≤ 0,30
Mg	2,10 ÷ 2,90
Cr	0,18 ÷ 0,28
Ni	
Zn	5,10 ÷ 6,10
Ti	≤ 0,20
Pb	
Bi	
Others	Each 0,05 Total 0,15
Al	Remainder

Physical properties		
Density	Kg / dm³	2,80
Modulus of elasticity	MPa	72.000
Coefficient of thermal expansion	x10⁻⁶ / °C	23,5
Thermal conductivity at 20°C	W / mk	130
Typical electrical resistivity at 20°C	Ω mm² / m	0,052

www.eural.com

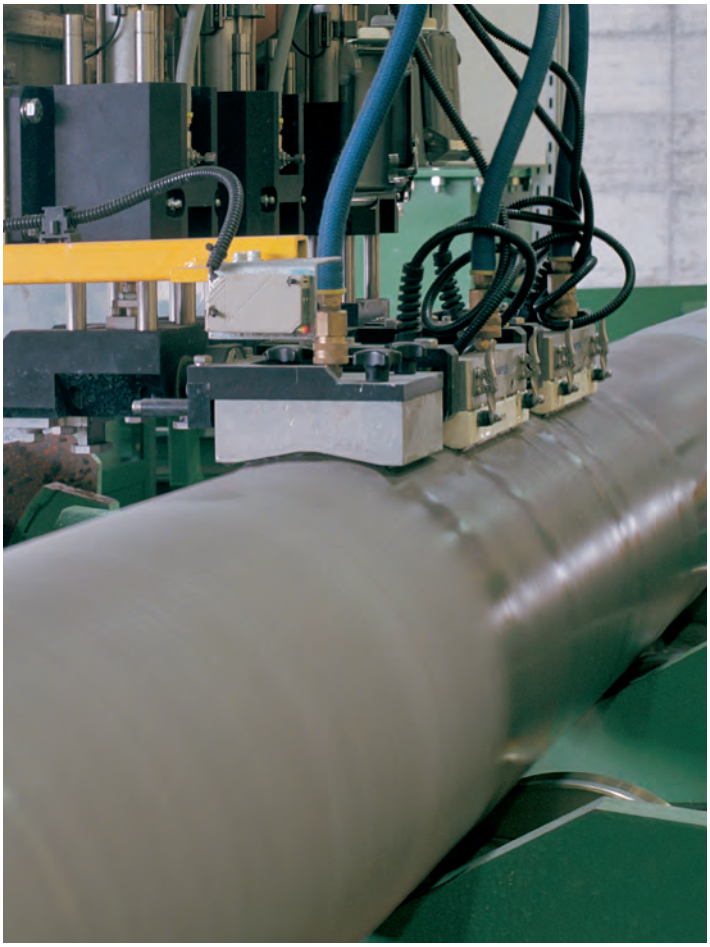
Mechanical properties						
	Temper	Diam. mm	Rm MPa	Rp0,2 MPa	A%	HBW Typical
Drawn	T6	≤ 80	540	485	7	150
	T651	≤ 80	540	485	5	150
	T73	≤ 80	455	385	10	135
	T7351	≤ 80	455	385	8	135
Extruded	T6, T6510, T6511	≤ 100	560	500	7	150
	T6, T6510, T6511	100 < D ≤ 150	550	440	5	150
	T6, T6510, T6511	150 < D ≤ 200	440	400	5	150
	T73, T73510, T73511	≤ 75	475	405	7	135
	T73, T73510, T7351	75 < D ≤ 100	470	390	6	135
	T73, T73510, T7351	100 < D ≤ 150	440	360	6	135

MD70201.02 GB REV 07 03/11/16

5500-T Indirect extrusion press

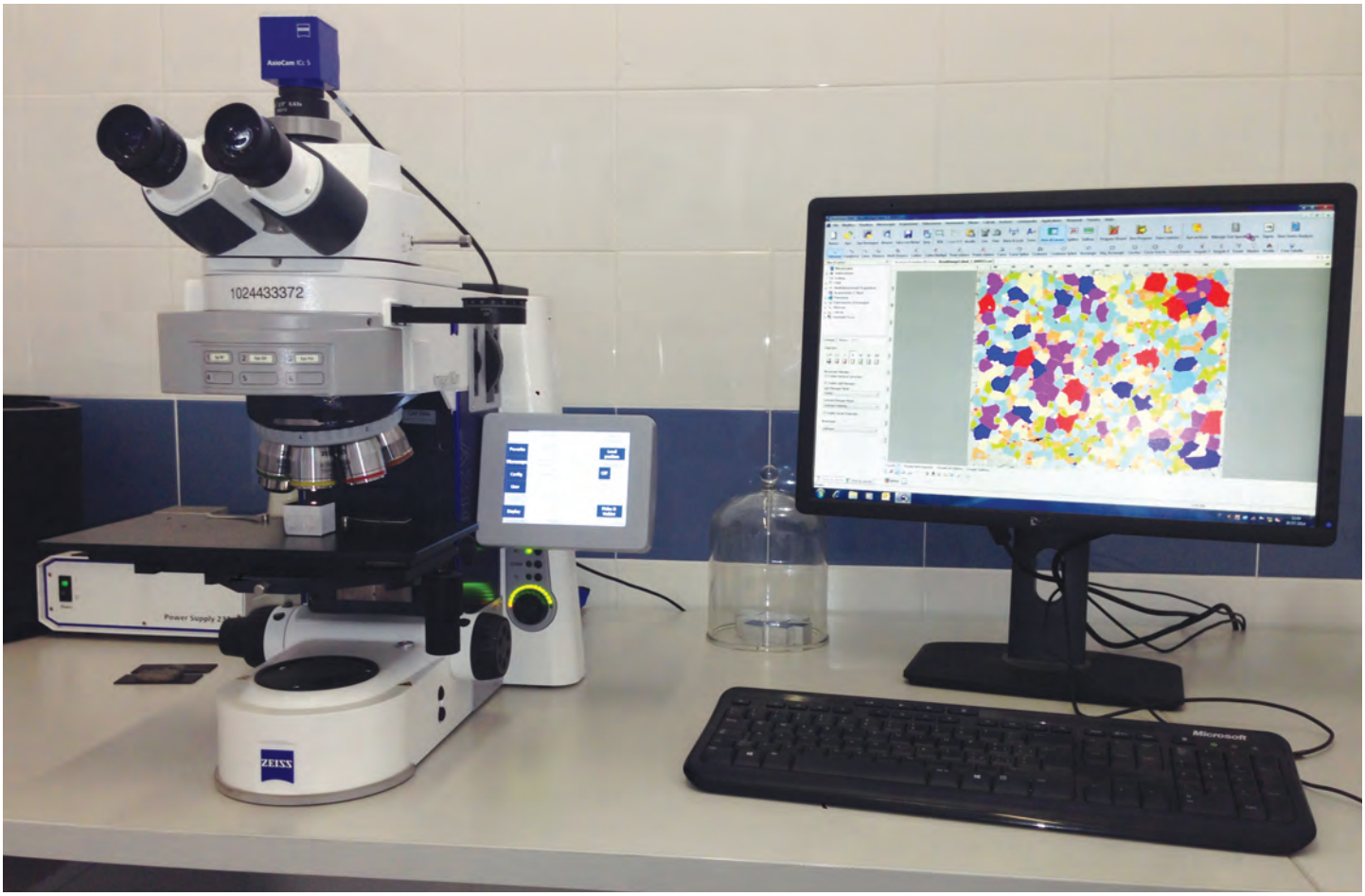
Billets extraction in foundry

Particular of bars warehouse



Automatic ultrasonic control system for the entire length of the billet according to class “A” of SAE AMS-STD-2154 regulation

Imprint of Eural logo, alloy code and batch number on all extruded bars



Particular of the research and development laboratory

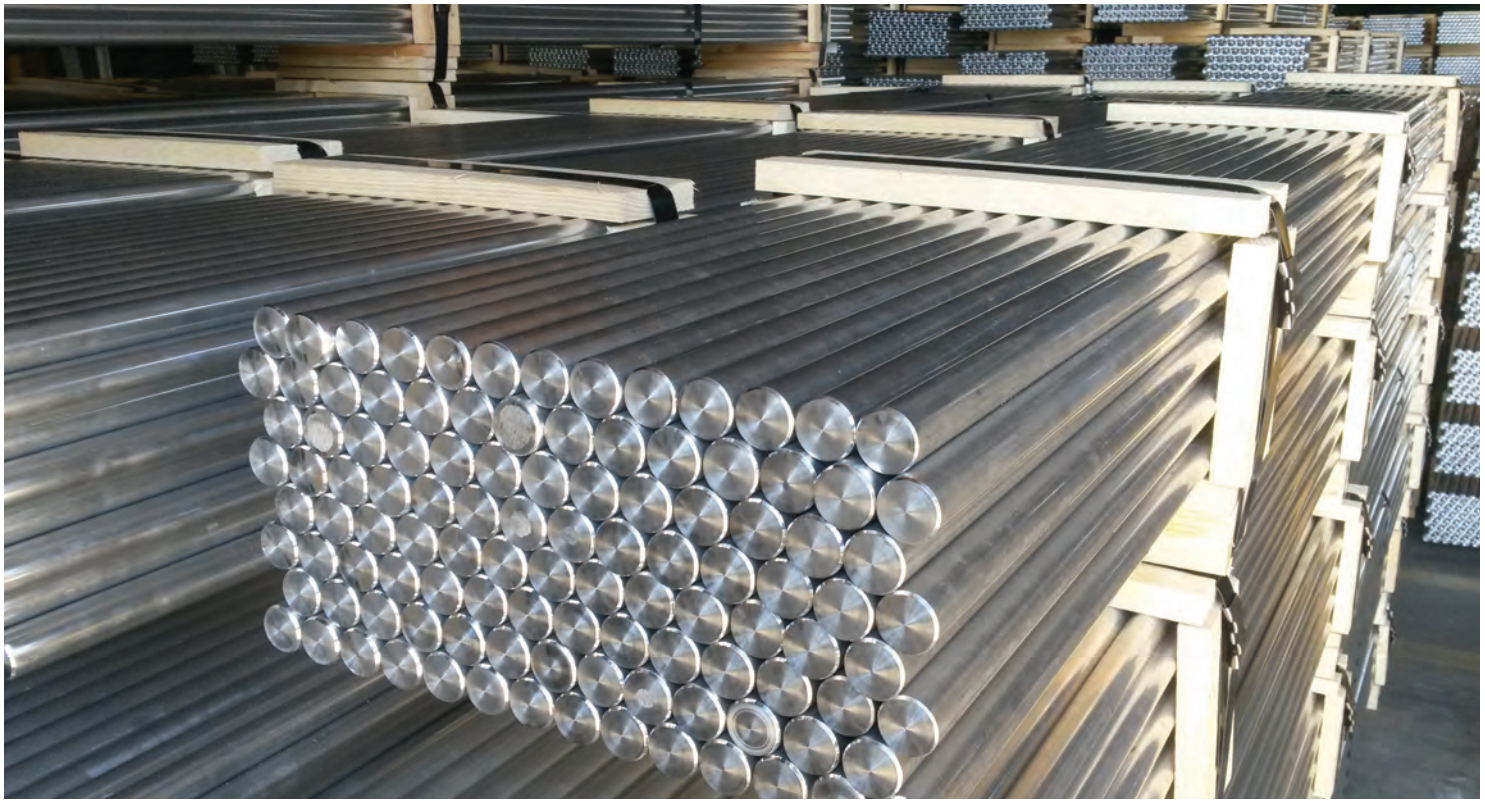
Eural Gnutti extrusion plant in Rovato (Brescia), Italy

Eural Gnutti foundry plant in Pontevico (Brescia), Italy

National and Company Alloy Designations

ALLOY	AA	EN	EN (CS)	ASTM	BS	BS(OLD)	DIN	WNR	JIS	JIS(OLD)	NF	NF(OLD)	SFS
	Intl.	Intl.	Intl.	USA	GB	GB	DE	DE	JP	JP	FR	FR	FI
2011	2011	2011	Al Cu6BiPb	2011	2011	FC1	AlCuBiPb	3.1655	A2011		2011	A-U5PbBi	
2030	2030	2030	Al Cu4PbMg	\			~AlCuMgPb				2030	A-U4Pb	
2007	2007	2007	Al Cu4PbMgMn	\			AlCuMgPb	3.1645				~ A-U4Pb	
2017A	2017A	2017A	Al Cu4MgSi(A)	~2017	2017A		AlCuMg1	3.1325	~A2017	A3x2	2017A	A-U4G	
2024	2024	2024	Al Cu4Mg1	2024	2024	2L97	AlCuMg2	3.1355	A2024	A3x4	2024	A-U4G1	
6026	6026	6026	Al MgSiBi	\									
6064A	6064A	6064A	Al Mg1SiBi	\									
6061	6061	6061	Al Mg1SiCu	6061	6061	H20	AlMg1SiCu	3.3211	A6061	A2x4	6061	A-GSUC	
6082	6082	6082	Al Si1MgMn		6082	H30	AlMgSi1	3.2315			6082	A-GSM0.7	2593
6262	6262	6262	Al Mg1SiPb	6262									
6262A	6262A	6262A	Al Mg1SiSn	\									
7075	7075	7075	Al Zn5,5MgCu	7075	7075	2L95	AlZnMgCu1,5	3.4365	A7075	A34x6	7075	A-Z5GU	

ALLOY	SNCH	SS	UNI	UNI(OLD)	UNS	NS	UNE	ASV	ALUSUISSE	CSA(OLD)	GOST(OLD)
	CH	SE	IT	IT							
2011	AlCu6BiPb	4355	9002/5	6362	A92011		L-3192		2500	CB60	
2030	AlCu4MgPb				A92030						
2007	AlCu4MgPb	4335	9002/8				L-3121		2118		
2017A			9002/2	3579	~A92017		L-3120		2100	CM41	D1/V65
2024	AlCu4Mg1,5		9002/4	3583	A92024		L-3140		2150	CG42	D16
6026											
6064A											
6061			9006/2	6170	A96061		L-3420	2079	6061	GS11N	AD33/AV
6082	AlMgSi1Mn	4212	~9006/4	3571		17305	L-3451	2005	6112	SG11R	AD35
6262											
6262A											
7075	AlZn6MgCu1,5		9007/2	3735	A97075		L-3710	2082	7215	ZG62	B95(V95)



Bundles of Eural Gnutti drawn bars

EURAL GNUTTI S.p.A.

Weight of aluminium bars in Kg/linear meter

Calculated on the Absolute Gravity (2,8 Kg/dm³)

mm.	●	■	⬣
5	0,0 55	-	-
6	0,079	-	-
7	0,107	-	-
8	0,140	0,179	0,155
9	0,178	0,226	0,196
10	0,219	0,280	0,242
11	0,266	0,338	0,293
12	0,316	0,403	0,349
13	0,371	0,473	0,409
14	0,431	0,548	0,475
15	0,494	0,630	0,545
16	0,562	0,716	0,620
17	0,635	0,809	0,700
18	0,712	0,907	0,785
19	0,793	1,011	0,875
20	0,879	1,120	0,969
21	0,969	1,234	1,069
22	1,064	1,355	1,173
23	1,163	1,481	1,282
24	1,266	1,613	1,396
25	1,374	1,750	1,515
26	1,486	1,893	1,679
27	1,603	2,041	1,767
28	1,724	2,195	1,901
29	1,849	2,355	2,039
30	1,979	2,520	2,182
31	2,113	2,690	2,330
32	2,251	2,867	2,483
33	2,394	3,049	2,640
34	2,542	3,236	2,803
35	2,693	3,430	2,970
36	2,850	3,628	3,142
37	3,010	3,833	3,319
38	3,175	4,043	3,501
39	3,344	4,258	3,688
40	3,518	4,480	3,879
41	3,696	4,706	4,076
42	3,879	4,939	4,277
43	4,066	5,177	4,483
44	4,257	5,420	4,694

mm.	●	■	⬣
45	4,552	5,670	4,910
46	4,653	5,924	5,131
47	4,857	6,185	5,356
48	5,066	6,451	5,586
49	5,280	6,722	5,822
50	5,497	7,000	6,062
51	5,719	7,282	6,307
52	5,946	7,571	6,556
53	6,177	7,865	6,811
54	6,412	8,165	7,071
55	6,652	8,470	7,335
56	6,896	8,780	7,604
57	7,144	9,097	7,878
58	7,397	9,419	8,157
59	7,655	9,746	8,441
60	7,916	10,080	8,729
61	8,183	10,418	9,023
62	8,453	10,763	9,321
63	8,728	11,113	9,624
64	9,007	11,468	9,932
65	9,291	11,830	10,245
66	9,579	12,196	10,562
67	9,872	12,569	10,885
68	10,169	12,947	11,212
69	10,470	13,330	11,544
70	10,775	13,720	11,881
71	11,096	14,115	12,223
72	11,400	14,515	12,570
73	11,719	14,921	12,922
74	12,042	15,332	13,278
75	12,370	15,750	13,639
76	12,702	16,173	14,006
77	13,038	16,601	14,377
78	13,379	17,035	14,753
79	13,724	17,475	15,133
80	14,074	17,920	15,519
81	14,428	18,370	15,909
82	14,786	18,827	16,305
83	15,149	19,290	16,705
84	15,517	19,756	17,109

mm.	●	■	⬣
85	15,888	20,230	17,519
86	16,264	20,708	17,934
87	16,645	21,193	18,353
88	17,030	21,683	18,778
89	17,419	22,178	19,207
90	17,813	22,680	19,641
91	18,210	23,186	20,080
92	18,613	23,649	20,524
93	19,020	24,217	20,972
94	19,413	24,740	21,426
95	19,837	25,270	21,884
96	20,267	25,805	22,347
97	20,691	26,345	22,815
98	21,120	26,891	23,288
99	21,553	27,442	23,766
100	21,991	28,000	24,248
105	24,245	30,870	-
110	26,609	33,880	-
115	29,083	37,030	-
120	31,667	40,320	-
125	34,344	43,750	-
130	37,165	47,320	-
135	40,078	51,000	-
140	43,102	54,880	-
145	46,236	58,870	-
150	49,480	63,000	-
155	52,833	67,270	-
160	56,297	71,680	-
165	59,870	76,230	-
170	63,554	80,920	-
175	67,347	-	-
180	71,251	-	-
190	79,347	-	-
200	87,920	-	-
210	96,980	-	-
220	106,43	-	-
230	116,33	-	-
240	126,66	-	-
250	137,44	-	-

MD70201.02 GB REV 07 03/11/16

EURAL
GNUTTI S.p.A.

QUALITY SYSTEM CERTIFICATION ISO/TS 16949 DNV

ENVIRONMENTAL SYSTEM CERTIFICATION ISO 14001 DNV

QUALITY SYSTEM CERTIFICATION ISO 9001 DNV

EURAL GNUTTI S.p.A.
25038 Rovato (Brescia) Italy
Via S. Andrea, 3
Company's capital 10.000.000
Vat Reg. IT 00566100988

Phone + 39 030 7725011

Bars department: **Fax +39 030 7702847 - bars@eural.com**
Sections department: **Fax +39 030 7701228 - sections@eural.com**
Administration: **Fax +39 030 7702837 - accounts@eural.com**

Foundry: **Fax+ 39 030 9930036 - foundry@eural.com**

www.eural.com - E-mail: eural@eural.com