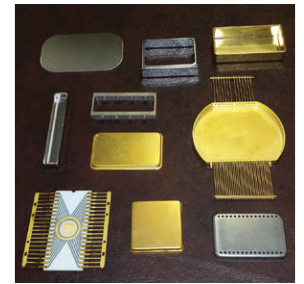
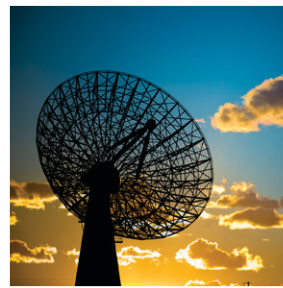


# 42 ALLOY



CHEMICAL COMPOSITION %	
Chemical Element	42 Alloy
Iron	Bal
Nickel	41
Manganese	0.80
Silicon	0.30
Carbon	0.05
Aluminum	0.10
Chromium	0.25
Phosphorus	0.025
Sulfur	0.025
PHYSICAL PROPERTIES	
Property	42 Alloy
Density	0.293
Specific Gravity	8.12
Specific Heat	0.12
Curie Temperature	716
Melting Point	2600
Electrical Resistivity	430
Thermal Conductivity	74.5
Linear coefficient of thermal expansion cm. per cm. per °C x 10 <sup>-6</sup>	
Temp. range – °C	42 Alloy
30-300	4.0 - 4.7

Certified to ASTM F30,  
AMS/MIL I 23011 Class 5

42 Alloy, a low expansion alloy, is very similar to Invar 36 with a slightly different Coefficient of Thermal Expansion. This nickel-iron alloy is ideal for lid, lead frames, stencil/etching, telecommunications and aircraft industry, offering a more affordable alternative to Kovar when a tight seal is not required.

42 Alloy has a virtually constant low rate of thermal expansion at temperatures up to approximately 650°F (343°C). Easily machined and formed hot or cold, 42 Alloy is also used extensively in the medical, electronics and automotive industries.

Let National Electronic Alloys help you analyze your business needs and objectives. Our procurement side and supply side experience can save you money and ensure that you make the best possible purchasing decisions.

**NEA** ISO 9001:2015  
Specialty Metal Service Center  
Dedicated to Customer Service & Quality

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1847 W. Business Center Dr., Orange, CA 92867  
**714-556-5561 • Fax: 714-556-5562**  
Toll Free: 877-632-9378  
Email: Sales@nealloyswest.com

# 42 ALLOY FROM STOCK

## 42 Alloy Plate

Thick.	Width	Length	Thick.	Width	Length
.157"	x 16.5"	x 72"	.450"	x 16.5"	x 72"
.195"	x 16.5"	x 72"	.500"	x 16.5"	x 72"
.270"	x 16.5"	x 72"	.750"	x 16.5"	x 72"
.320"	x 16"	x 63"	1	x 16"	x 72"
.375"	x 16"	x 72"	<b>2</b>	<b>x 4.25"</b>	<b>x 48"</b>
.410"	x 16.5"	x 72"			<b>Billet</b>

Custom plate sizing available upon request.  
We have shearing and saw cutting capabilities for plate.

## 42 Alloy Sheet

Thick.	Width	Length
.015"	x 12"	x 72"
.020"	x 24"	x 72"
.030"	x 24"	x 72"
.040"	x 24"	x 72"
.061"	x 24"	x 72"
.100"	x 24"	x 72"
.125"	x 24"	x 72"

We can shear to your width.

## 42 Alloy Roundbar

Diamter	Length
.125"	x 72"/144"
.156"	x 72"/144"
.1875"	x 144"
.255"	x 115"
.312"	x 115"
.437"	x 132"/144"
.750"	x 135"
1.01"	x 135"

Custom Wire sizes available upon request.

## 42 Alloy Coil

Base - Lead Frame - Deep Draw & Chemical Milling Quality

.004" x 12"	.0095" x 12"	.020" x 12"
.0045" x 1"	.010" x 12"	.025" x 12"
.005" x 12"	.010" x 12"	.030" x 12"
.006" x 12"	(halfhard)	.040" x 12.5"
.0075" x 12"	.0142" x 12"	.050" x 12" I
.008" x 12"	.015" x 12"	.060" x 12"

Custom sizes available upon request.  
Slitting, Cut to Length and Traverse Winding services available.

**Certified To AMS/MIL I 23011 Class 5 • All Above Available From Stock**

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