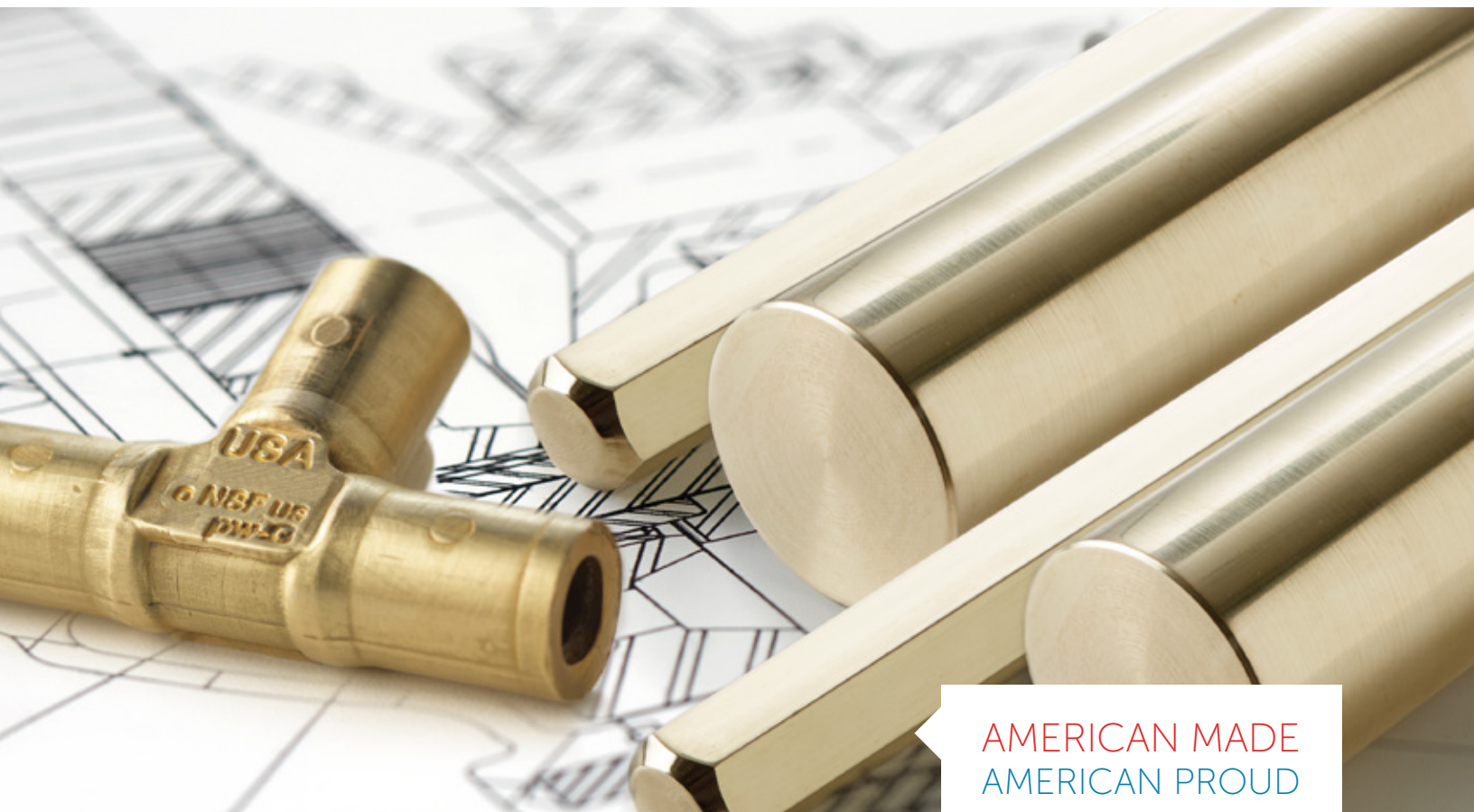




Wieland Chase Brass Product Guide



AMERICAN MADE
AMERICAN PROUD

Standard Alloys

HIGH PERFORMANCE BRASS

Quality and consistency allows customers to produce more components per hour, maintain tighter tolerances, and reduce costs through longer tool life.

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Advantages:

- Excellent machinability
- Good corrosion resistance
- High productivity, low cost alloy
- 100% recyclable
- Proven performance for machining and thread rolling
- Longer tool life
- Greatest overall value



C36000

APPLICATION: FREE CUTTING-MACHINING
ASTM: B16
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS: 1,000 – 4,000 LBS.

C37700

APPLICATION: FORGING-MACHINING BRASS
ASTM: B981
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS: 1,000 – 4,000 LBS.

Chemistry Composition

Rod Alloy	CU	Pb	Fe	Zn
C36000	60.0 - 63.0%	2.5 - 3.0%	0.35% max	Remainder
C37700	58.0 - 61.0%	1.5 - 2.5%	0.30% max	Remainder

C36000 & C37700 Sizes/shapes

 Round
0.250" - 4.50"

 Hex / RC Hex
0.250" - 2.50"

 Square
0.250" - 2.00"

 Shapes
Cross section up to 2.50"

C36000 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.250" - 0.500"	0.0015"	0.003"
>0.500" - 1.000"	0.002"	0.004"
>1.000" - 2.000"	0.0025"	0.005"
>2.000"	0.15%	0.30%

C37700 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.250" - 0.500"	0.002"	0.004"
>0.500" - 1.000"	0.003"	0.005"
>1.000" - 2.000"	0.004"	0.006"
>2.000"	0.20%	0.40%

C36000 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)	Hardness RD (Rb)	Hardness HX/OC (Rb)
≤0.500"	57	25	7	—	—
>0.500" - 1.000"	55	25	10	60 - 80	55 - 80
>1.000" - 2.000"	50	20	15	55 - 75	45 - 80
>2.000" - 3.000"	45	15	20	45 - 70	40 - 65
>3.000" - 4.000"	45	15	20	40 - 65	35 - 60
>4.000"	40	15	20	25 min	25 min

C37700 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)
>0.250" - 0.500"	63	28	10
>0.500" - 1.000"	55	26	12
>1.000" - 2.000"	48	24	20
>2.000"	45	20	25

Low Lead Brass

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HIGH PERFORMANCE LOW-LEADED BRASS

Good machinability, forgeability and thread rolling capability. Easily recyclable with leaded brass, and available in multiple chemistry options for custom applications.

Advantages:

- Multiple chemistry options for custom applications
- 100% recyclable
- Good thread rolling capability
- Good forgeability



C27450

APPLICATION:
MACHINING-FORGING
ASTM: B927
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS:
1,000 – 4,000 LBS.

C36300

APPLICATION:
MACHINING-FORGING
ASTM: B981
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS:
1,000 – 4,000 LBS.

C37000

APPLICATION:
MACHINING-FORGING
ASTM: B981
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS:
1,000 – 4,000 LBS.

Chemistry Composition

Rod Alloy	CU	Pb	P	Fe	Zn
C27450	60.0 - 65.0%	0.25% max	0.04 - 0.10%	0.35% max	Remainder
C36300	61.0 - 63.0%	0.25 - 0.7%	0.04 - 0.15%	0.15% max	Remainder
C37000	59.0 - 62.0%	0.8 - 1.5%	—	0.15% max	Remainder

C27450 Sizes/shapes

 Round
0.375" - 4.50"

 RC Hex
0.562" - 2.50"

 Square
0.562" - 2.00"

 Shapes
Consult Mill

C27450 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.250" - 0.500"	0.0015"	0.003"
>0.500" - 1.000"	0.002"	0.004"
>1.000" - 2.000"	0.0025"	0.005"
>2.000" - 3.000"	0.15%	0.30%

C27450 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)
>0.250" - 0.500"	53	33	10
>0.500" - 1.000"	48	30	13
>1.000" - 2.000"	43	28	15

C36300 & C37000 Sizes/shapes

 Round
0.375" - 4.50"

 RC Hex
0.562" - 2.50"

 Square
0.562" - 2.00"

 Shapes
Consult Mill

C36300 & C37000 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.250" - 0.500"	0.002"	0.004"
>0.500" - 1.000"	0.003"	0.005"
>1.000" - 2.000"	0.004"	0.006"
>2.000"	0.20%	0.40%

C36300 & C37000 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)
>0.250" - 0.500"	63	28	10
>0.500" - 1.000"	55	26	12
>1.000" - 2.000"	48	24	20
>2.000"	45	20	25

ECO BRASS

HIGH PERFORMANCE SILICON BRASS

Lead-free, excellent machinability, forgeability, and high strength equivalent to stainless steel, while eliminating the problems of stress corrosion cracking and dezincification.

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Advantages:

- Lead-free, arsenic-free, and bismuth-free
- S3874 & AB1953 compliant
- Dezincification corrosion resistant
- Stress corrosion cracking resistant
- NSF 14 compliant
- Excellent machinability
- Hot forgeability
- Solders and brazes with standard materials
- Wear resistance equal to commercial bronze
- Strength equal to stainless steel
- 100% recyclable



C69300

APPLICATION: MACHINE-FORGING
ASTM: B371
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS: 1,000 – 4,000 LBS.

INGOT C87850

APPLICATION: INGOT
ASTM: B30
LENGTHS: 12 INCHES
INGOT WEIGHTS: 17 LBS / INGOT
1,700 LBS / 100 INGOTS BOXED

Chemistry Composition

Rod Alloy	CU	Si	P	Pb	Fe	Sn	Ni	Mn	Sb	Zn
C69300	73.0-77.0%	2.7-3.4%	0.04-0.15%	0.09% max	0.10% max	0.20% max	0.10% max	0.10% max	—	Remain.
C87850	75.0-78.0%	2.7-3.4%	0.05-0.20%	0.09% max	0.10% max	0.30% max	0.20% max	0.10% max	0.10% max	Remain.

C69300 Sizes/shapes

 Round
0.375" - 2.50"

 RC Hex
0.437" - 2.00"

 Shapes
Consult Mill

C69300 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.150" - 0.500"	0.002"	0.004"
>0.500" - 1.000"	0.003"	0.005"
>1.000" - 2.000"	0.004"	0.006"
>2.000"	0.20%	0.40%

C69300 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)
>0.150" - 0.500"	85	45	5
>0.500" - 1.000"	75	35	10
>1.000" - 2.000"	70	30	10

C87850 Sizes/shapes

Shape	English	Length
Extruded Octagon Solid	2.400"	12"-12´

C87850 Diameter/tolerances +/-

Diameter (inch)	Octagonal
>2.000"	40%

C87850 Minimum Mechanical Properties

Casting Method	Tensile (ksi)	Yield (ksi)	Elongation (%)	ASTM
Sand	59	22	16	B584
Permanent Mold	64	32	16	B806
Continuous Cast	65	25	8	B505

ECO BRONZE

HIGH PERFORMANCE SILICON BRONZE

Tough bearing material that is environmentally friendly and cost effective. A great lead-free, arsenic-free, and bismuth-free alternative to C93200 leaded.

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Advantages:

- Lead-free, arsenic-free, and bismuth-free
- S3874 & AB1953 compliant
- Dezincification corrosion resistant
- Stress corrosion cracking resistant
- NSF 14 compliant
- Excellent machinability
- Hot forgeability
- Solders and brazes with standard materials
- Wear resistance equal to commercial bronze
- Strength equal to stainless steel
- 100% recyclable



THIS IS
TOUGH
STUFF

C69300

APPLICATION: MACHINE-FORGING
ASTM: B371
LENGTHS: 10 TO 16 FEET
BUNDLE WEIGHTS: 1,000 – 4,000 LBS.

INGOT C87850

APPLICATION: INGOT
ASTM: B30
LENGTHS: 12 INCHES
INGOT WEIGHTS: 17 LBS / INGOT
2,500 LBS / PALLET

Chemistry Composition

Rod Alloy	CU	Si	P	Pb	Fe	Sn	Ni	Mn
C69300	73.0-77.0%	2.7-3.4%	0.04-0.15%	0.09% max	0.10% max	0.20% max	0.10% max	0.10% max
C87850	75.0-78.0%	2.7-3.4%	0.05-0.20%	0.09% max	0.10% max	0.30% max	0.20% max	0.10% max

C69300 Sizes/shapes

 Round
0.375" - 2.50"

 RC Hex
0.437" - 2.00"

 Shapes
Consult Mill

C69300 Diameter/tolerances +/-

Diameter	Round	Hexagonal, Octagonal
>0.150" - 0.500"	0.002"	0.004"
>0.500" - 1.000"	0.003"	0.005"
>1.000" - 2.000"	0.004"	0.006"
>2.000"	0.20%	0.40%

C69300 Minimum Mechanical Properties

Diameter (inch)	Tensile (ksi)	Yield (ksi)	Elongation (%)
>0.150" - 0.500"	85	45	5
>0.500" - 1.000"	75	35	10
>1.000" - 2.000"	70	30	10

C87850 Sizes/shapes

Shape	English
Extruded Octagon Solid	2.400"
Available As Continuous Cast Product:	
Extruded Rounds Solids (sold as C693)	0.375" -
Cast Round Solids and Rectangles	0.500" -
Cast Round Hollows	0.500" -
	4.000" -

C87850 Minimum Mechanical Properties

Casting Method	Tensile (ksi)	Yield (ksi)	Elongation (%)
Sand	59	22	
Permanent Mold	64	32	
Continuous Cast	65	25	



Engineered Products

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WE WANT YOU TO BRING YOUR BRASS
PARTS BUSINESS BACK TO THE USA.

Wieland Chase can provide custom engineered raw and finished material products made with any of our high performance brass alloys, including our ECO BRASS lead-free alloy.



C36000
C37700



C36300



C69300
C87850

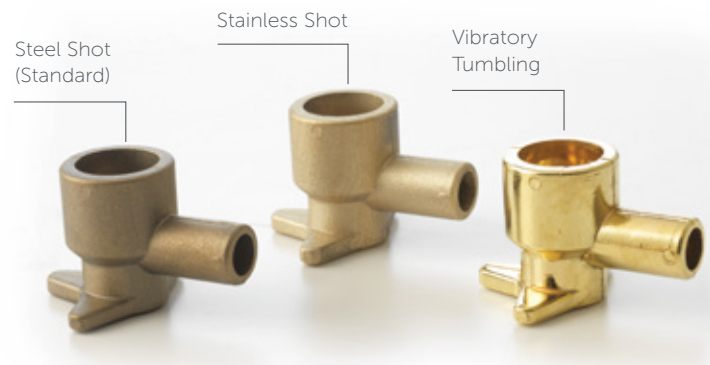


C87850



Your Domestic Solution For Forgings!

Finishes Available



Using Wieland Chase Engineered Products Can Make You More Competitive

- Longer Tool Life and Shorter Cycle Time
- Reduced Working Capital/Inventory
- Less Wear & Tear on Equipment
- Less Scrap Handling
- Efficient Labor Utilization, Energy Use and Reduced Transportation Costs
- Less Lead Time Compared to International Supply Chains

More Efficient Material Use Means Savings

- Process Uses Up to 3 Cores per Part to Save Weight
- Less Material Purchased
- Less Scrap Generated
- Forged Microstructures
- Forging Parts without Flash
- ISO6509 Dezincification Resistance (F only)
- UL1821 Stress Corrosion Cracking Resistance (F only)

WIELAND CHASE CAN ALSO SUGGEST QUALIFIED MACHINING PARTNERS IF YOU PREFER FINISHED PARTS.



Your Leading Source For Brass Solutions

For More Information

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www.wieland-chase.com



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