



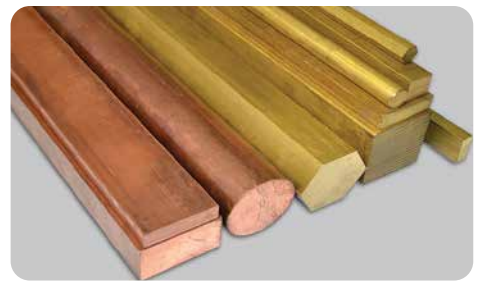
Alro Steel

Metals • Industrial Supplies • Plastics



RED METALS

**Product Guide for Brass, Bronze
and Copper Requirements**



RED METALS: COPPER

Copper is a ductile metal with very high thermal and electrical conductivity. Pure copper is soft and malleable. It is often used as a conductor of heat and electricity, a building material and a constituent of various metal alloys. Copper has outstanding corrosion resistance, excellent cold formability and machines quite easily.

Copper End Uses:

- Bus bar, for telecommunications and housing industries
- Domestic and industrial plumbing goods
- Chemical processing equipment
- Contacts and switchgear
- Heat transfer devices
- Electrical wiring

Copper Grades and Shapes stocked at Alro:

- **CDA 110** round, square and flat bar
- **CDA 145** round and hex
- **Cold rolled copper roofing sheet:**
 - 12 oz. (Full sheets available)
 - 16 oz. (Full sheets available)
 - 20 oz. (Full sheets available)

Copper Grades available by inquiry (non-stock):

- **CDA 101, 102** Oxygen free
- **CDA 122** Phosphorus Deoxidized
- **CDA 182** RWMA Class II Chrome Copper
- **CDA 17510** RWMA Class III Beryllium Copper
- **CDA 180** RWMA Class III Beryllium free Copper
- **CDA 187** Leaded Copper

CDA 110 (ETP) Copper

SHAPE	THICKNESS	LENGTH	SHAPE	THICKNESS	WIDTH	LENGTH
Round:	1/4" - 6" dia.	12 ft	Flat:	1/16" - 2"	2-1/2" - 8"	12 ft
Square:	3/8" - 4" thick	12 ft	Plate:	1/4" - 6"	36"	8 ft
			Sheet:	.032"-.235"	36"	8 ft

Coil - By inquiry only

CDA 145 Tellurium Copper

SHAPE	THICKNESS	LENGTH
Round:	1/4" - 2" dia.	12 ft

Beryllium Copper Plate

Used mostly in the mold industry, Beryllium Copper Plate offers an optimum combination of:

- Hardness
- Thermal fatigue
- Wear resistance
- Thermal conductivity

When compared to Steel and Aluminum, **CDA 172 Beryllium Copper Plate** offers advantages such as:

- Minimizing part distortion
- Better dimensional stability
- Improved cycle time

This material can be welded by several methods including resistance, MIG and TIG welding. **Alro offers Beryllium Copper Plate in Ultra (RC 36-42) and Supra (RC 25-32).**

CDA 172 Beryllium Copper

TYPE	PLATE	DIAMETER	TYPE	PLATE	DIAMETER
Low Hard / Supra (RC 25-32)	1/4" - 4" Thick	Inquire	High Hard / Ultra (RC 36-42)	1/4" - 3" Thick	Inquire

-- CDA 172 Beryllium Copper available by inquiry only (non-stock) --

RED METALS: BRASS

CDA 360, also known as **Free Machining Brass** due to its excellence in continuous, high speed machining applications, will offer minimal tool and machine wear during long production runs. Like Copper, **CDA 360 Free Machining Brass** is a soft, ductile metal and machines quite easily. Some other advantages include outstanding corrosion resistance and excellent cold formability.

Readily available, **CDA 360 Free Machining Brass** shapes include flat bar, rounds, squares and hex. **CDA 260 Half Hard Brass** sheet and plate are available from Alro stock. Tubing and special shapes are available upon request.

Brass End Uses:

- Ammunition Components
- Plumbing
- Automotive
- Hardware

Special Alloys available by inquiry (non-stock):

- **CDA 353** Thread Rolling
- **CDA 365** Leaded Muntz
- **CDA 798** Nickel Silver
- **CDA 345** Thread Rolling
- **CDA 693** Lead Free



CDA 360 Free Machining Brass

SHAPE	THICKNESS	LENGTH	SHAPE	THICKNESS	WIDTH	LENGTH
Round:	1/8" - 12" dia.	12 ft	Flat:	1/8" - 2"	1/4" - 6"	12 ft
Hex:	1/8" - 4"	12 ft	Square:	3/16" - 4"	-	12 ft

Diameters 5" and up provided as Cast & Turned
For Tubing and Special Shapes please inquire

CDA 260 Half Hard Brass

SHAPE	THICKNESS	WIDTH	LENGTH
Sheet:	.025" - .1875"	36"	8 ft
Plate:	1/4" - 1/2"	36"	8 ft

RED METALS: BRONZE

Continuous Cast Bronze Products (932, 954 & 959) are cast oversized to allow for finish machining to nominal dimensions and provides uniform grain structure which can eliminate hard spots and improve machinability. Unlike Copper and Brass, Bronze is a hard, strong alloy, preferred in applications where high impact, wear and vibration are an issue.

CDA 932/SAE 660 Bearing Bronze is used in many industrial, automotive, appliance, bearing and bushing applications. Some advantages include good wear resistance and excellent machinability. Bearing Bronze is the most economical choice alloy for general purpose bearing and wear use.

CDA 954 & 959 Aluminum Bronze offers exceptional performance in bearings, bushings and other applications where abrasion, wear and fatigue are encountered. Aluminum Bronze offers high strength, excellent corrosion resistance and better strength and performance at elevated temperatures than 932/660. It can be heat treated to higher hardness.

Bronze grades available by inquiry (non-stock):

- **CDA 314, 316** Leaded Commercial Bronze
- **CDA 385** Architectural Bronze
- **CDA 464** Naval Bronze
- **CDA 510, 521, 524, 544** Phosphorous Bronze
- **CDA 630** Nickel Aluminum Bronze
- **CDA 642, 651, 655** Silicon Bronze
- **CDA 798** Nickel Silver
- **SAE 841** Sintered Bronze
- **CDA 863** Manganese Bronze
- **CDA 903, 907** High Tin Bronze

Available Bronze Shapes and Sizes from Alro stock:

CDA 932/SAE 660 Bronze

SHAPE	THICKNESS	WIDTH	LENGTH
Flat:	1/4" - 4" thk	6" - 10"	105" - 107"
Round:	3/8" - 12" dia	-	105" - 107"
Hollowbar:	1"OD - 16"OD	-	105" - 107"

CDA 954 Aluminum Bronze

SHAPE	THICKNESS	WIDTH	LENGTH
Flat:	1/4" - 1" thk	3" - 6"	12 ft
Square:	1/2" - 6" thk	-	12 ft
Round:	1/2" - 11" dia	-	12 ft
Hollowbar:	1"OD - 9"OD	-	12 ft

CDA 959 Aluminum Bronze

SHAPE	THICKNESS	WIDTH	LENGTH
Flat:	1/4" - 1" thk	3" - 6"	12 ft

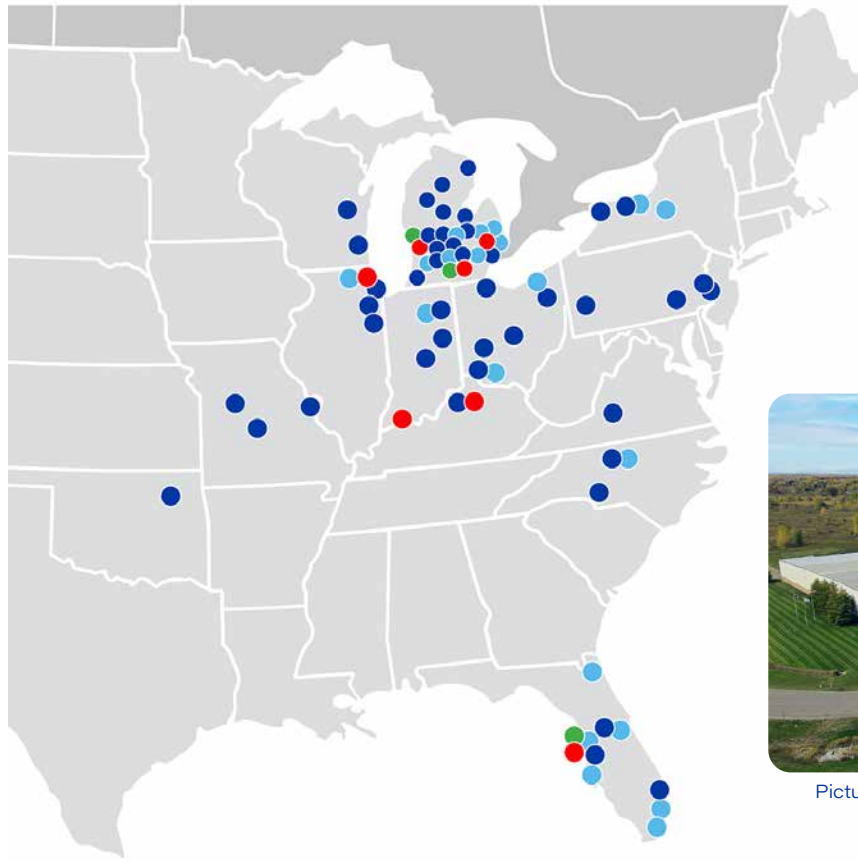
For Square Bar please inquire



Alro Locations



● Alro Steel / Alro Metals ● Alro Industrial Supply ● Alro Plastics ● Alro Metals Outlet



Over 70 Locations in 13 States!

- | | | |
|----------|----------------|--------------|
| Florida | Michigan | Oklahoma |
| Illinois | Missouri | Pennsylvania |
| Indiana | New York | Virginia |
| Kentucky | North Carolina | Wisconsin |
| | Ohio | |



Pictured above, the Alro Steel facility in Potterville, Michigan

Integrity. Loyalty. Honesty. These principles have guided Alro Steel since our founding in 1948 by brothers, Al and Robert Glick. From a small garage in Jackson, Michigan, Alro Steel has grown to over 70 locations in 13 states. Alro distributes metals, industrial supplies and plastics. A wide variety of processing services are available including cut-to-size metals and plastics with next day delivery to over 50,000 customers in North America. Focused on exceeding our customers' expectations, we build relationships with all our customers, large and small. [To learn more, visit alro.com.](http://alro.com)

Your Grocery Store for Metals

Metals & Shapes

	Bar	Pipe & Tube	Plate & Sheet	Structural	Grating & Exp. Metal
Alloy	●	●	●		
Aluminum	●	●	●	●	●
Brass	●		●		
Bronze	●	●			
Carbon Steel	●	●	●	●	●
Cast Iron	●	●			
Copper	●	●	●		
Stainless Steel	●	●	●	●	●
Tool Steel	●		●		



e-Business Solutions

- Alro Online Store (MyAlro.com)
- Customized Summary Billing
- Tool Management Solutions
- B2B Transactions

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