

Known for years as Commercial Bronze, this alloy derives its name from its rich bronze color. More a brass than an actual bronze, C220 offers a unique set of properties that make it great for applications requiring deep drawing and resistance to corrosion including valves, buttons and pen ink tubes. Its appealing color also makes it ideal for architectural applications such as hinges, doorknobs, escutcheons and kick plates. For more information contact Olin Brass Market Development Engineering at 618-258-5255, OlinBrass.com or email us at info@olinbrass.com.

Chemical Composition

Copper¹	89.0 - 91.0%
Zinc	Remainder
Lead	0.05% Max
Iron	0.05% Max

¹ Copper plus named elements, 99.8%

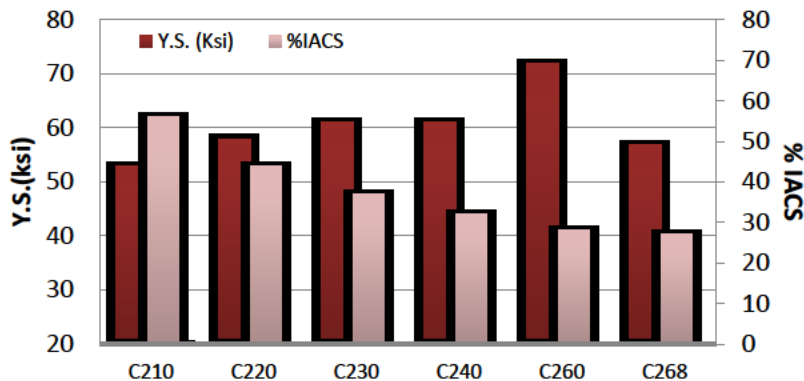


Figure 1: Comparison of Yield Strength and Electrical Conductivity performance of select Hard temper brass materials.

Physical Properties

	English Units	Metric Units
Density	0.318 lb/in ³ @ 68°F	8.80 g/cm ³
Thermal Conductivity	109 BTU-ft/ft ² -hr-°F	189 W/mK
Electrical Resistivity	23.6 ohm circ mils/ft	3.92 microhm-cm
Electrical Conductivity (annealed)	44% IACS*	0.255 megamho/cm
Modulus of Elasticity	17,000,000 psi	117 kN/mm ²
Coeff. Of Thermal Expansion		
68-572°F (20-300°C)	10.2 PPM/°F	18.36 PPM/°C

*International Annealed Copper Standard

Mechanical Properties

Temper ¹	Tensile Strength		Yield Strength		% Elongation ²	Typical 90° Bend Formability GW/BW ³	
	ksi	N/mm ²	ksi	N/mm ²			
Annealed (Soft) ⁴	36-42	250-290	12	85	47	-	-
1/4 Hard	40-50	275-345	33	230	27	-	-
1/2 Hard	47-57	325-395	47	325	12	-	-
3/4 Hard	52-62	360-425	54	370	6	-	0.5
Hard	57-66	395-455	58	400	4	0.5	0.8
Extra Hard	64-72	440-495	63	435	2	1.0	1.3
Spring	69-77	475-530	68	470	1 Min	1.5	2.0
Extra Spring	72-80	495-550	70	485	1 Max		

¹ Mechanical properties subject to change. All rolled- tempers are accepted or rejected based on Tensile Strength.

² Nominal Values in 2" (51mm)

³ DATA FOR REFERENCE ONLY. R/T = Bend Radius/Material Thickness <0.016" (0.4mm) thick, 11/16 (17.5mm) wide.

⁴ Annealed temper are manufactured to a grain size only, consult mill for additional info.

Olin Brass Headquarters

4801 Olympia Park
Plaza, Suite 3500
Louisville, KY 40241
Ph: 502-873-3000

GBC METALS ASIA PACIFIC PTE LTD

1 Kim Seng Promenade
Great World City, E Tower
Singapore 237994
Ph: 65.6238.1155

GBC METALS LLC SHANGHAI

Room 2004 Aetna Tower
No. 107 Zunyi Rd
Shanghai 200051 China
Ph: 86.21.6237.5898

OLIN BRASS-HEADQUARTERS

4801 Olympia Park
Plaza, Suite 3500
Louisville, KY 40241
Ph: 502-873-3000

OLIN BRASS - MILL

285 Lewis & Clark Blvd.
East Alton, IL 62024
Ph: 618-258-5255

BRYAN METALS INC.

1103 South Main Street
Bryan OH 43506-0487
Ph: 419-636-4571
Fx: 419-636-3994

SOMERS THIN STRIP

215 Piedmont Street
Waterbury, CT 06706
Ph: 203-597-5000
Fx: 203-597-5081

A.J. OSTER COMPANY

180 ALEXANDRA WAY
Carol Stream, IL 60188-2068
Ph: 630-260-1040
Ph: 800-323-9644
Fx: 630-260-1102

A.J. OSTER CARIBE, INC.

Centro industrial Rio Canas
Lote 29, P.M.B HC-01
Box 29030
Caguas, PR 00725
Ph: 787-747-7575

A.J. OSTER FOILS, INC.

2081 McCrea Street
Alliance, OH 44601-2793
Ph: 330-823-1700
Ph: 800-321-9750
Fx: 330-823-1705

A.J. OSTER WEST INC.

22833 La Palma Avenue
Yorba Linda, CA 92887-4767
Ph: 714-692-1000
Ph: 800-933-5933
Fx: 714-692-1225

A.J. OSTER COMPANY

457 Industrial Drive
Warwick, RI 02886
Ph: 401-739-0800
Fx: 401-739-1276

INTERNATIONAL SALES OFFICES & FACILITIES**GBC METALS ASIA PACIFIC PTE LTD.**

1 Kim Seng Road Promenade
Great World City, East Tower #13-04
Singapore 237994
Ph: 65.6238.1155
Fx: 65.6238.0660

GBC METALS LLC SHANGHAI

Room 2004, Aetna Tower
No. 107 Zunyi Road
Shanghai 200051, China
Ph: 86.21.6237.5898
Fx: 86.21.6237.5805

OLIN LUOTONG METALS (GZ) Co Ltd

No. 8 Jung Gong Road, East District
Guangzhou Economic Technological & Dev District
Guangzhou, P.R. China 510530
Ph: 86.20.8226.6818
Fx: 86.20.8226.6718

DOWA-OLIN METAL CORPORATION

2630, Shingai
Iwata-shi, Shiznoka-ken
438, Japan
Ph: 81.538.37.5111
Fx: 81.538.37.0147

OLIN BRASS - INTERNATIONAL DISTRIBUTORS**UNITED KINGDOM / IRELAND****Aurubis UK Ltd.**

Rabone Park, Smethwick
West Midlands B66 2NN
England
Ph: 44 (0) 121 555 1199
Fx: 44 (0) 121 555 1188
Email: info-uk@aurubis.com
Website: www.aurubis.com

EUROPE**Walter Türkis GmbH**

Struthstrasse 35
55743 Idar-Oberstein
Germany
Ph: 49 (0) 6781 62-0
Fx: 49 (0) 6781 62-28
Email: service@tuerkis-schneid-center.de
Website: www.tuerkis-schneid-center.de

OLIN BRASS MEXICO S.A. de CV

Av. La Griega # 117
Parque Industrial Queretaro
Santa Rosa, Jaurgui
Queretaro, Mexico 76220
Ph: 52 442 2 29 40 00
Fx: 52 442 2 29 40 29