

**ALLOY**  
**DATA**

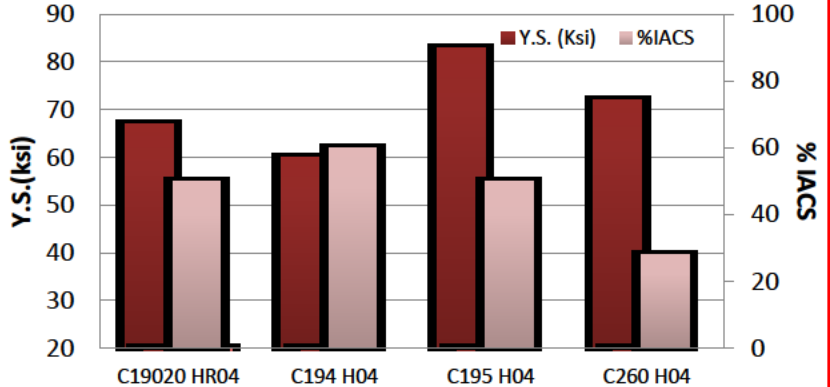
**C19500**  
ASTM B465



Alloy C19500, Strescon, is a high strength, high electrical conductivity copper alloy. Use in a range of applications and specifically electrical hardware this alloys offers a balanced combination of strength and conductivity. This alloy allows parts to be reduced in size without sacrificing performance in many cases. Designers requiring an alloy with improved resistance to stress relaxation should also consider C19025 or C18080 for enhanced performance. For more information contact Olin Brass Market Development Engineering at 618-258-5255, OlinBrass.com or email us at info@olinbrass.com.

**Chemical Composition**

<b>Copper</b>	<b>96.0% Min</b>
<b>Iron</b>	<b>1.0-2.0%</b>
<b>Phosphorus</b>	<b>0.01-0.35%</b>
<b>Cobalt</b>	<b>0.30-1.3%</b>
<b>Tin</b>	<b>0.10-1.0%</b>
<b>Zinc</b>	<b>0.20% Max</b>
<b>Aluminum</b>	<b>0.02% Max</b>
<b>Lead</b>	<b>0.02% Max</b>



**Figure 1:** Comparison of Yield Strength and Electrical Conductivity performance of select highly electrical connector materials.

**Physical Properties**

	English Units	Metric Units
Density	0.322 lb/in <sup>3</sup> @ 68°F	8.92 g/cm <sup>3</sup>
Thermal Conductivity	115 BTU-ft/ft <sup>2</sup> -hr-°F	200 W/m <sup>2</sup> K
Electrical Resistivity	20.80 ohm circ mils/ft	3.94 microhm-cm
Electrical Conductivity (annealed)	50% IACS*	0.293 megamho/cm
Modulus of Elasticity	17,300,000 psi	121 kN/mm <sup>2</sup>
Magnetic Permeability	1.1-1.15μ	1.1-1.15μ
Coeff. Of Thermal Expansion 68-572°F (20-300°C)	9.6 PPM/°F	17.3 PPM/°C

\*International Annealed Copper Standard

**Mechanical Properties**

Temper <sup>1</sup>	Tensile Strength		Yield Strength <sup>2</sup>		% Elongation <sup>2</sup>	Typical 90° Bend Formability GW/BW <sup>3</sup>	
	ksi	N/mm <sup>2</sup>	ksi	N/mm <sup>2</sup>			
Annealed	50-60	345-415	28	195	26	-	-
1/4 Hard	60-72	415-495	57	395	14	0.3	0.3
1/2 Hard	68-78	470-540	71	490	6	0.8	0.8
3/4 Hard	75-85	515-585	77	530	3	1.0	1.3
Hard	82-90	565-620	83	570	2	1.5	1.8
Spring	88-97	605-670	88	605	2	2.5	2.5

<sup>1</sup> Mechanical properties subject to change. All tempers listed are made to a Tensile Strength specification

<sup>2</sup> Nominal Values      <sup>3</sup> DATA FOR REFERENCE ONLY. R/T = Bend Radius/Material Thickness <0.016" (0.4mm) thick, 11/16 (17.5mm) wide.

**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