

Olin Brass Alloy C7025 is a High Performance Alloy developed to meet the increasing material requirements of interconnect designers. C7025 combines good electrical and thermal conductivity with high strength, excellent stress relaxation resistance, good solderability and plateability. This combination of properties lends the alloy to be used in a wide variety of applications including automotive and electrical connectors, semiconductor leadframes and CPU sockets. The alloy can often be substituted directly for some Be-Cu alloys. 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<sup>1</sup></b>	<b>Remainder</b>
<b>Nickel</b>	<b>2.2-4.2%</b>
<b>Silicon</b>	<b>0.25-1.2%</b>
<b>Magnesium</b>	<b>0.05-0.30%</b>
Iron	0.20% max
Lead	0.05% max
Zinc	1.0% max

1. Cu plus Named Elements, 99.5%

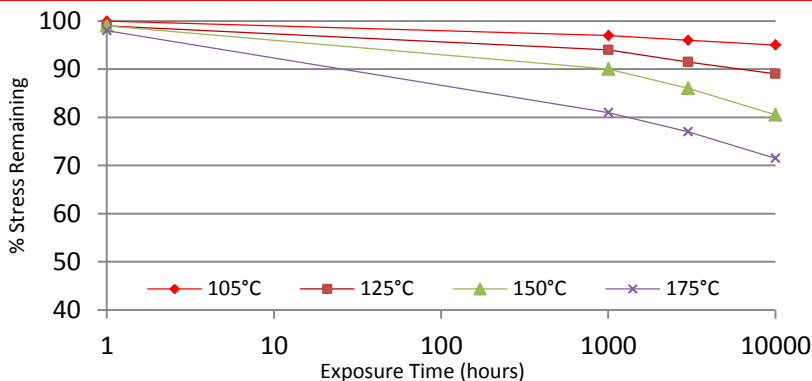


Figure 1: Stress relaxation performance of C7025 TM02.

**Physical Properties**

	English Units	Metric Units
Density	0.318 lb/in <sup>3</sup> @ 68°F	8.82 g/cm <sup>3</sup>
Thermal Conductivity	100 BTU-ft/ft <sup>2</sup> -hr-°F	172 W/m <sup>2</sup> K
Electrical Resistivity	25.9 ohm circ mils/ft	4.3 microhm-cm
Electrical Conductivity (annealed)	40% IACS*	0.23 megamho/cm
Modulus of Elasticity	19,000,000 psi	131 kN/mm <sup>2</sup>
Coeff. Of Thermal Expansion	68-212°F (20-100°C)	9.3 PPM/°F
	68-392°F (20-200°C)	9.6 PPM/°F
	68-572°F (20-300°C)	9.8 PPM/°F
		16.7 PPM/°C
		17.4 PPM/°C
		17.6 PPM/°C

\*International Annealed Copper Standard

**Mechanical Properties**

Temper <sup>1</sup>	Tensile Strength		Yield Strength <sup>2</sup>		% Elongation	Typical 90° Bend Formability GW/BW <sup>3</sup>	
	ksi	N/mm <sup>2</sup>	ksi	N/mm <sup>2</sup>			
TM00	90-110	620-760	65-90	450-620	10% Min	1.00	0.50
TM02	95-120	655-830	85-110	590-760	7% Min	1.50	0.50
TM03	100-125	690-860	95-120	655-830	5% Min	1.50	1.00
TM03 HDC <sup>4</sup>	103-125	710-860	100-120	690-830	3% Min		
TR02	88 Min	605 Min	80 Min	550 Min	6% Min		

<sup>1</sup> Mechanical properties subject to change. Tensile strength and elongation are for reference only.

<sup>2</sup> C7025 is manufactured to a yield strength.

<sup>3</sup> R/T = Minimum Bend Radius/Material Thickness <0.020" (0.5mm) thick, 11/16 (17.5mm) wide.

<sup>4</sup> HDC - High Density Connector. Developed specifically for socket contacts demanding very narrow tight bend performance.

**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