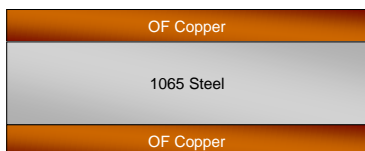


**Product Overview**

Conflex conducting spring materials offer cost and performance advantages over traditional current-carrying spring materials, such as solid copper, beryllium copper, and phosphor bronze, by combining the strength and spring properties of steel with the conductivity of copper. Virtually any combination of strength, elasticity, and conductivity is achievable with the proper material selection and placement in the clad composite. Typical applications include electrical contact blades, carrier strips, switch components, sliding contact fingers, pressure diaphragms, grounding strips, terminals, fuse clips and many other applications requiring structural strength combined with electrical and thermal conductivity.



**Product Description**

<b>EMS Material Designation</b>	<b>CONFLEX 326</b>
<b>Composition</b>	<b>Copper / 1065 Steel / Copper</b>
<b>Ratio</b>	<b>10 / 80 / 10</b>

**Chemical Composition**

<u>UNS</u>	<u>Grade Eur</u>	<u>Chemistry (%)</u>
<b>C10200</b>	OF-Cu	Cu+Ag 99.95 min., O 0.0010 max.
<b>G10650</b>	DIN 1.123	C 0.60-0.70, Mn 0.60-0.90, P 0.04 max., S 0.05 max.

**Physical Properties**

	<b>ENGLISH</b>		<b>METRIC</b>	
Density	0.291	lb / in <sup>3</sup>	8.05	g / cm <sup>3</sup>
Electrical Conductivity	26	%IACS	0.151	μS / cm
Electrical Resistivity	39.9	cir mil ohm / ft	6.6	μohms-cm
Modulus of Elasticity	22,000	Kpsi	152	GPa
Coefficient of Thermal Expansion	7.30	μin / in-°F	13.1	μm / m-°C
Maximum Service Temperature	200 - 300	°F	93 - 150	°C

**Mechanical Properties (Typical)  
(Annealed)** See table for other tempers

	<b>ENGLISH</b>		<b>METRIC</b>	
Yield Strength 0.2%offset	58	Kpsi	400	MPa
Tensile Strength	68	Kpsi	469	MPa
Elongation 2" gage length	30	%	30	%
Hardness (Steel layer)	170	HV	87	Rockwell B

**Formability**



**CONFLEX Conducting Spring Materials**

**Data Sheet - CONFLEX 326**

The high carbon steel core produces a clad composite with good formability and excellent spring properties.

**Process Design**

CONFLEX is typically provided fully annealed or with a cold rolled temper. If a heat treated temper is required, it is normal to perform this after parts fabrication. Standard heat treatment procedure is to anneal the product between 1,500 - 1,550 °F (815 - 840 °C) for 2 - 5 minutes, quench, and then heat treat for 30 minutes at the target tempering temperature.

System	Components	Ratio	Condition	Tensile Strength		0.2% Yield Strength		Elongation (% in 2")	Hardness (Steel)	
				KPsi	MPa	KPsi	MPa		Vickers	Rockwell
Conflex 326	OF Copper 1065 Steel OF Copper	10% 80% 10%	Annealed	68	469	58	400	30	170	B87
			21% Cold Work Temper	98	676	88	607	8	257	C24
			37% Cold Work Temper	118	814	107	738	6	302	C30
			60% Cold Work Temper	138	951	129	889	3	340	C35
			Heat Treat Temper, 900°F	150	1034	130	896	7	390	C40
			Heat Treat Temper, 700°F	190	1310	170	1172	6	485	C48
			Heat Treat Temper, 500°F	220	1517	200	1379	4	610	C56

**Availability**

<b>Gauge</b>	0.0030 - 0.0600 inches (0.08 - 1.5 mm)
<b>Width</b>	Widths up to 20 inches (508 mm) available.
<b>Ratio</b>	Others available upon request
<b>Surface</b>	Bright (polished) or matte
<b>Temper</b>	Annealed, cold rolled, and heat treated tempers available.
<b>Form</b>	Coils or sheets

**Contact**

For additional information, please contact:

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