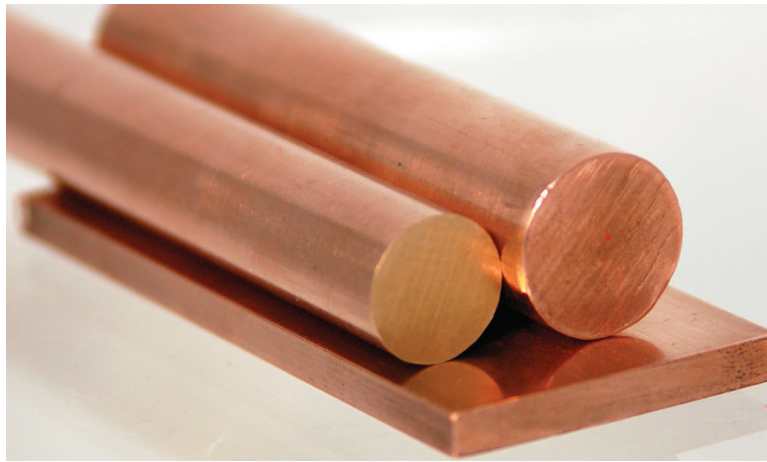


# C10100 OXYGEN-FREE ELECTRONIC COPPER (CDA 101)

OFFERED IN ROUND BAR AND PLATE



**C10100 Oxygen-Free Electronic Copper is a 99.99% pure copper with 0.0005% oxygen content. C10100 achieves a minimum 101% IACS conductivity rating. This copper is finished to a final form in a carefully regulated, oxygen-free environment. C10100 has High Ductility, High electrical and thermal conductivity and low volatility under high vacuum. Also known as OFE C10100.**

## TYPICAL USES

### Automotive

Automotive Rectifiers

### Electrical

Bus Bars, Switchgears, Stab Terminals, Transistor Component Bases, High Resistance-Ratio Cryogenic Shunts, Bus Conductors, Wave Guides, Hollow Conductors, Anodes for Vacuum Tubes, Coaxial Cable, Coaxial Tube, Klystrons, Microwave Tubes, Lead-in Wire, Vacuum Seals, Conductors, Glass-to-Metal Seals, Heat Sinks, Welding Electrodes, Spray Nozzles.

Excellent Conductivity, Excellent Formability, Excellent Ductility.

Resistant to Hydrogen Embattlement.

## SIZES AVAILABLE

Round Bar.....1/2" - 8" diameter  
Plate.....1/8" - 4"

## SIMILAR OR EQUIVALENT SPECS

ASTM B187, ASTM F68, ASTM B152, ASTM B432

## CHEMICAL COMPOSITION

	CU <sup>(1,2,3)</sup>	PB	ZN	FE	P
min/max	99.99 min	0.0005	0.0001	0.0010	0.0003
	AG	AS	O	SB	TE
min/max	0.0025	0.0005	0.0005	0.0004	0.0002



[www.avivametals.com](http://www.avivametals.com)

# C10100 OXYGEN-FREE ELECTRONIC COPPER (CDA 101)

Mechanical Properties, Physical Properties

## MECHANICAL PROPERTIES

FORM	TEMPER	SECTION SIZE (INCHES)	TENSILE STRENGTH (KSI) MIN	YIELD STRENGTH (KSI) MIN	ELONGATION IN HD MIN	ROCKWELL HARDNESS (B)	SHEAR STRENGTH (KSI)	FATIGUE STRENGTH (KSI)
Plate	H02	0.04	42	36	14	40	26	13
	H01	0.04	38	30	25	25	25	-
	H01	0.25	38	30	35	25	25	-
	H00	0.25	36	28	40	10	25	-
	H00	0.04	36	28	30	10	25	-
	M20	0.04	34	10	45	-	23	-
	M20	0.25	32	10	50	-	22	-
	H10	0.04	57	53	4	62	29	-
	H04	0.25	50	45	12	50	28	-
	H04	0.04	50	45	6	50	28	13
	H04	1	45	40	20	45	26	-
	OS025	0.04	34	11	45	-	23	11
	OS050	0.04	32	10	45	-	22	-
	OS050	0.25	32	10	50	-	22	-
	H08	0.04	55	50	4	60	29	14
Bar	M20	1	32	10	55	-	22	-
	H04	0.25	55	50	10	60	29	-
	H04	2	45	40	20	45	26	-
	H04	1	48	44	16	47	27	17
	OS050	1	32	10	55	-	22	-
Rectangle	M30	0.5	32	10	50	-	22	-
	M20	0.5	32	10	50	-	22	-
	H04	0.5	40	32	30	35	26	-
	OS050	0.5	32	10	50	-	22	-

## PHYSICAL PROPERTIES

Melting Point - Liquidus °F.....	1981
Melting Point - Solidus °F.....	1981
Density lb/cu in @ 68 °F.....	0.323
Specific Gravity.....	8.94
Electrical Conductivity % IACS @ 68 °F.....	101
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F.....	226
Coefficient of Thermal Expansion 10 <sup>-6</sup> per °F (68-212 °F).....	9.4
Coefficient of Thermal Expansion 10 <sup>-6</sup> per °F (68-392 °F).....	9.6
Coefficient of Thermal Expansion 10 <sup>-6</sup> per °F (68-572 °F).....	9.8
Specific Heat Capacity Btu/lb/ °F @ 68 °F.....	0.092
Modulus of Elasticity in Tension ksi.....	17000
Modulus of Rigidity ksi.....	6400
Machinability Rating.....	20

### AVIVA Color Code



ORANGE

The values listed on this document represent reasonable approximations suitable for general engineering use. Due to commercial variations in composition and to manufacturing limitations, they should not be used for specification purposes. See applicable A.S.T.M. Specification references.

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