

CDA 110

Electrolytic Tough Pitch Copper

NOMINAL COMPOSITION

Copper	99.90% Min
Other Elements (Total)	0.10% Max

PHYSICAL PROPERTIES

Color	Copper
Melting Point (Solidus)	1981°F (1083°C)
Flow Point (Liquidus)	1981°F (1083°C)
Brazing Temperature Range	2000°F - 2150°F (1093°C - 1177°C)
Specific Gravity	8.94
Density (lbs /in ³)	0.323
Electrical Conductivity (%IACS) ⁽¹⁾	101
Electrical Resistivity (Microhm-cm)	1.71

⁽¹⁾IACS = International Annealed Copper Standard

PRODUCT USES

CDA 110 is a fluid filler metal used for brazing of ferrous and nickel based alloys in particular steel, stainless steel and copper-nickel alloys. This alloy is typically used in a furnace braze applications without the use of flux.

BRAZING CHARACTERISTICS

CDA 110 is a free flowing filler metal that exhibits good wetting characteristics on ferrous and nickel based materials. Maximum strength and joint integrity are obtained where joint clearance falls within the range of 0.000 in - 0.001 in. (0.000 – 0.025 mm) per side.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. Lap joints have been tested and brazed for tensile strength at room temperature, on the listed metals, with the following results:

	Tensile Strength (lbs/in ²)	Elongation (% in 2 in.)
Cold-Rolled Steel	50,000 - 65,000	15.0 - 35.0

AVAILABLE FORMS

Wire, strip, engineered preforms, and specialty preforms per customer specification.

SPECIFICATIONS

CDA 110 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BCu-1b

Technical Data Sheet

- Society of Automotive Engineers (SAE) / AMS 4500 (Chemistry only)
- Unified Numbering System (UNS) C11000
- ASME Boiler & Pressure Vessel Code, Sec II-C, SFA-5.8 BCu-1b
- International Organization for Standardization (ISO) 17672 Cu 110
- British Standard (BS) EN 1044 Cu 103
- Deutsches Institut für Normung (DIN) 8513 Part 1 L-SFCu

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: A00000358, Legacy Code: 60-110.

SAFETY INFORMATION

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Material Safety Data Sheet for CDA 110.

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