



株洲艾美新材料有限公司 ZHUZHOU AMALLOY MATERIAL CO., LTD.

中国 湖南 株洲市 天元区黄河北路 1478 号 邮编: 412007

1478, N.Huanghe Road, Tianyuan District, Zhuzhou, Hunan, 412007, P.R. China

电话/TEL: +86-731-2222 8088

传真/FAX: +86-731-2222 8168

www.amalloy.cn

info@amalloy.cn

AM173-EU (C17300) Rod

AM173-EU is a high performance copper alloy with free machining characteristics. It could minimize signal distortion in coaxial RF connectors and reduce power loss in circular connectors and contact probes.

AM173-EU (C17300) parts, after machining and forming operations, could be easily heat treated and plated to obtain maximum mechanical and electrical performance.

APPLICATION: In Electronic and Electrical Industry: probe cards, switch parts, relay parts, electrical connectors, fuse clips, contact bridges, electrical motor components, navigational instruments, electrical switch and relay blades.

FORM: In straight rod or coiled wire. Length: up to 3m. Diameters range from 1.0 mm to 16.0 mm. Rod end in pointed or(and) chamfered as required is made, depending on the diameter. Surface condition: cold drawn and grinded surface free of any scratch, residues and cracks.

SPECIFICATION: ASTM B 196

CHEMICAL COMPOSITION (weight percent)

Alloy	Beryllium	Nickel+Cobalt	Nickel+Cobalt+Iron	Lead	Copper
C17300	1.80 – 2.00	0.20 min.	0.6 max.	0.20 – 0.6	Balance

PHYSICAL PROPERTIES

Elastic Modulus	Melting Point (Solidus)	Electrical Conductivity /Resistivity	Density	Thermal Expansion Coefficient	Thermal Conductivity (25°C)	Machinability Index
131 GPa	870 °C	5.8-6.9 μΩ-cm	8.36 g/cm ³	17.0x10 ⁻⁶ m/m °C	105 W/m K	60% (vs. free-cutting brass)

*Specified for the heat treated condition. Density before the heat treated is 0.300 lb/in³ (8.30 g/cm³).

Grain size is less than 0.025 mm.

MECHANICAL PROPERTIES

Temper	Diameter mm	Heat Treatment Required	0.2% Offset Yield Strength	Ultimate Tensile Strength	Elongation (4D)
		315 – 357 °C	Mpa	Mpa	Percent
H (TD04)	1.0-9.5	2-3 hours	520-720	620-900	8-30
H (TD04)	>9.5-16.0	2-3 hours	520-720	620-860	8-30
HT (TH04)	1.0-9.5	-	1100-1380	1280-1550	2-9
HT (TH04)	>9.5-16.0	-	1070-1340	1240-1520	2-9

*Properties may vary by diameter. Hardness for TH04 is HV0.5 340 – 440.

*Rod is typically provided by mill in cold drawn temper (TD04) and Heat Treatment is performed by customer after machining.



株洲艾美新材料有限公司 ZHUZHOU AMALLOY MATERIAL CO., LTD.

中国 湖南 株洲市 天元区黄河北路 1478 号 邮编: 412007

1478, N.Huanghe Road, Tianyuan District, Zhuzhou, Hunan, 412007, P.R. China

电话/TEL: +86-731-2222 8088

传真/FAX: +86-731-2222 8168

www.amalloy.cn

info@amalloy.cn

AM173-EU (C17300) Rod

TOLERANCES

	Diameter (mm)		Standard Tolerance (mm)			
	Over	Including	Diameter			Out of Round
			h6	h7	h8	
Cold Drawn	1.00	3.0	0	0	0	0.010
			-0.006	-0.009	-0.014	
	3.0	6.0	0	0	0	0.018
			-0.008	-0.012	-0.018	
6.0	10.0	0	0	0	0.025	
		-0.009	-0.015	-0.022		
10.0	16.0	0	0	0	0.050	
		-0.011	-0.018	-0.027		

Tolerance: Standard production h8. Tighter tolerances h7 or h6 may be available at additional cost. Any specific tolerance should be provided when placing the order.

PACKING

20-30Kg per bundle, 100-120kg per wooden case, other packing can also be made at customer's request.

*AM173, equivalent to C17300, is the alloy number of the Company.