

## ELECTROLYTIC TOUGH PITCH COPPER – ALLOY 110

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Alloy 110 copper, with high electrical and thermal conductivity, excellent ductility, hot and cold workability, plus good corrosion resistance and solderability. Rods, bars and sections supplied in the extruded / cold drawn condition.

### Typical Applications:

Bus bars, electrical contacts, radio parts, transformers, switches, heat exchanger parts, terminals, rivets, cotter pins, nails, tacks, printing rolls, cooking utensils, plus various other electrical, mechanical, architectural and building components.

### Machinability Rating:

20% of free-machining brass

### Joining Methods:

Soldering: Excellent  
 Brazing: Good  
 Welding: Carbon Arc: Fair  
 Welding: Shielded Arc: Fair  
 Welding: other: Not recommended

### Typical Chemical Composition

Copper	(Cu)	99.90% min
Oxygen	(O)	0.025%

### Related specifications:

AS 1567	110
ASTM / UNS	C 11000
BS 1036	C 101
ISO	Cu-ETP
JIS H 3250	C1100

### Fabrication Properties:

Hot working: Excellent  
 Cold working: Excellent  
 Riveting & Peening: Excellent  
 Thread rolling: Excellent

Hot working range: 750°C – 875°C  
 Casting range: 1120°C – 1200°C  
 Melting range: 1065°C – 1083°C

### Heat Treatment:

Annealing: 475°C – 750°C  
 Stress relieving: 150°C – 200°C

### Typical Mechanical Properties: Rods, Bars & Sections – for guidance only

Condition	0.2 % Proof Stress MPa	Tensile Strength MPa	Elong %	Hardness HV	Shear Strength MPa
Extruded / Drawn	130 – 260	250 – 300	25 – 40	80 – 110	130 – 185

Good low temperature mechanical properties.