

DESCRIPTION

Cz137, Engraving brass, are 60/40 alpha-beta brasses with lead added to give free machining properties. They should not be used for acid etched work, for which the single phase alpha brasses should be used.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	58.5	61
Pb	0.3	0.8
Fe	0	0.2
Total Others	0	0.5
Zn	-	Remainder

MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (Inch)	From	To	UTS Min (N/mm ²)	PS Min	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	6.00	40.00	380.00	-	25.00	-	-
	40.00	75.00	350.00	-	28.00	-	-
Hex (A/F)	6.00	40.00	380.00	-	25.00	-	-
	40.00	75.00	350.00	-	28.00	-	-
Square (A/F)	6.00	40.00	380.00	-	25.00	-	-
	40.00	75.00	350.00	-	28.00	-	-



PHYSICAL PROPERTIES

Melting Point - Liquidus °F	1650
Melting Point - Solidus °F	1630
Density lb/cu in. at 68°F	0.304
Specific Gravity	8.41
Electrical Conductivity %IACS at 68°F	27
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	69
Coefficient of Thermal Expansion 68-572 10 ⁻⁶ per °F (68-572°F)	11.6
Specific Heat Capacity Btu / lb / °F at 68°F	0.09
Modulus of Elasticity in Tension ksi	15000
Modulus of Rigidity ksi	5600

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Coated Metal Arc Welding	Not Recommended
Spot Weld	Not Recommended
Seam Weld	Not Recommended
Butt Weld	Fair
Capacity for Being Cold Worked	Fair
Capacity for Being Hot Formed	Excellent
Machinability Rating	70

TYPICAL USES

- > Automatic Screw Machine Parts
- > Blanking
- > Riveting
- > Brazing
- > Upsetting

