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CIC 12,5

Designation	CIC 12,5 / 75 / 12,5

CIC stands for copper / Invar® / copper and describes a composite material consisting of three layers. The core layer is made from an iron-nickel alloy with 36 % nickel content (frequently referred to as Invar®) and represents 75 % of the volume of the composite. The cover layer material is copper and represents 12,5 % of the volume per side. CIC shows a low thermal expansion factor together with good thermal conductivity.

COMPOSITION OF MATERIAL

- Core material : FeNi36
  Volume: 72,5- 77,5 %
- Cladding: Cu-PHC
  Volume: 11,25 – 13,75 %

PHYSICAL PROPERTIES

· Density	8,33 g/cm³
· Electrical conductivity	14,5 m/Ω mm² (at 20 °C R380)
· Electrical resistivity	0,069 Ω mm²/m (at 20 °C R380)
· Thermal conductivity	X,Y Plane: 110 W/K m (at 20 °C); Z Plane: 19 W/K m (at 20 °C)
· Coefficient of thermal expansion (linear)	2,4 – 5,6·10^{-6}/K (at - 55 to + 125 °C)
· Modulus of elesticity (tensile)	140 GPa (at 20 °C R380)

MANUFACTURING PROGRAM	THICKNESS	WIDTH
Rolls, spools, sheets	0,02 - 0,15 mm	1 - 610 mm

not all combinations of thickness and width are available
or different dimensions please contact our technical service

TYPICAL TEMPER VALUES (information only)

	Tensile strength Rm in MPa	Yield strength $Rp_{0,2}$ in MPa	Elongation in % L_0 = 100 mm
R380	350 - 500	210-370	> 10
R560	≥ 560	> 450	< 3

The values in the table are valid only for foils with thickness > 0,1 mm

For further information please visit our website: https://www.schlenk.com