

CIC 20

Designation	CIC 20 / 60 / 20
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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 60 % of the volume of the composite. The cover layer material is copper and represents 20 % of the volume per side. CIC shows a low thermal expansion factor together with good thermal conductivity.

COMPOSITION OF MATERIAL

- Core material: FeNi36
Volume: 56- 64 %
- Cladding: Cu-PHC
Volume: 18 – 22 %

• Density	8,43 g/cm ³
• Electrical conductivity	23 m/Ω mm ² (at 20°C R310)
• Electrical resistivity	0,043 Ω mm ² /m (at 20 °C R310)
• Thermal conductivity	X,Y Plane: 167 W/K m (at 20 °C); Z Plane: 20 W/K m (at 20 °C)
• Coefficient of thermal expansion (linear)	2,54 – 5,08·10 ⁻⁶ /K (at - 55 to + 125°C)
• Modulus of elasticity (tensile)	140 GPa (at 20°C R310)

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 Rp0,2 in MPa	Elongation in % L ₀ = 100 mm
R310	270 - 450	150 – 300	> 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>

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