

INV 145 STRIP

DATASHEET

Inv 145 is a nickel-iron alloy (NiFe alloy) for use at temperatures up to 200°C. The alloy has a low constant thermal expansion factor up to 180°C.

Typical applications for Inv 145 are in thermostats and thermostatic bimetals.

CHEMICAL COMPOSITION (NOMINAL)

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Ni
36
Balance Fe.

MECHANICAL PROPERTIES

Yield strength	Tensile strength	Elongation	Hardness
R _{p0.2}	R _m	A	
MPa	MPa	%	Hv
320	500	30	120

PHYSICAL PROPERTIES

Density g/cm ³	8.08
Electrical resistivity at 20°C, Ω mm ² /m ⁻¹	≤0.82

COEFFICIENT OF THERMAL EXPANSION

Temperature °C	Thermal Expansion X10 ⁻⁶ /K
30-130	1.9

THERMAL CONDUCTIVITY

Temperature °C	100
W m ⁻¹ K ⁻¹	11

SPECIFIC HEAT CAPACITY

Temperature °C	20
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kJ kg ⁻¹ K ⁻¹	0.51
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Melting point °C	1425
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Magnetic properties	The material is magnetic up to approximately 180°C.
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Disclaimer: Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice. This datasheet is only valid for materials under the trademark Kanthal®.