



* Industrial heat treatment furnace

Technical datasheet

Incoloy 802

Major specifications

GH802 UNS N08802

Available product forms

Bars in GB/T 15007.

The current stock range can be found on www.lorksteels.com/products/inconel.html.

Further dimensions available upon request.

Use our Service Centre to have the available sizes cut to your desired dimensions.

Key features

Incoloy 802 is a high-carbon nickel-iron-chromium alloy developed from the Incoloy 800 series and designed specifically for high-temperature environments. A distinguishing feature of Alloy 802 is its higher carbon content; at elevated temperatures, carbon promotes carbide formation, thereby enhancing high-temperature strength and carburization resistance, while the addition of aluminum and titanium further improves the alloy's high-temperature performance. This alloy is particularly well-suited for components subjected to prolonged heating, carbon-rich atmospheres, wear, and repeated thermal cycling.

Chemical properties

Composition - limits in %

Ti	Al	C	Cr	Ni	Fe
0.20-0.80	0.50-1.20	max0.35	19.00-23.00	32.00-46.00	balance

Mechanical properties (room temperature)

Yield strength (0.2%)	min. 200 MPa
Tensile strength	min. 550 MPa
Elongation	min. 30%

Applications in the aerospace sector

	Advantages
Carburizing furnace tooling and racks	High-temperature resistance to abrasive wear and carburization
Hot-work dies and extrusion tools	High-temperature resistance to deformation and thermal fatigue
Petrochemical furnace tubes	Resistance to high-temperature oxidation, carburization, and sulfidation
Radiant tube protective sleeve	Combined high-temperature strength and thermal shock resistance