Nickel 201 Datasheet

Nickel 201 is a low carbon, commercially pure nickel offering excellent corrosion resistance and improved performance in high temperature applications.

Alloy / Grade	Nickel 201
Common Forms	Plate, Sheet, Strip, Pipe, Tube, Bar, Wire.
Key Feature	Resistance to graphitization and embrittlement at high temperatures.
Service Focus	The primary advantage over Nickel 200. It remains ductile and tough where Nickel 200 would become brittle due to carbon precipitation.

1. Product Overview

Nickel 201 is the low-carbon version of Nickel 200 . Its extremely low carbon content (0.02% max) prevents embrittlement by intergranular carbon at elevated temperatures, making it the required choice for service above 600 deg F (315 deg C).

Grade	Core Description	Typical Service Focus
Nickel 201	Nickel 201 is the low-carbon version of Nickel 200 . Its extremely low carbon content (0.02% max) prevents...	While Nickel 201 shares the excellent corrosion resistance of Nickel 200, it should be specified for any...
Supply Capability	Plate, Sheet, Strip, Pipe, Tube, Bar, Wire.	Standard mill forms, cut-to-size material and project supply
Technical Review	Confirm final values by product form, heat treatment and material certificate	The primary advantage over Nickel 200. It remains ductile and tough where Nickel 200 would become brittle...

2. Key Features

- While Nickel 201 shares the excellent corrosion resistance of Nickel 200, it should be specified for any application operating continuously above...
- The primary advantage over Nickel 200. It remains ductile and tough where Nickel 200 would become brittle due to carbon precipitation.
- Ideal for evaporators, reactors, and piping systems handling concentrated caustic soda at temperatures well above 600 deg F (315 deg C).
- Used for electronic components that see high operating temperatures, such as anodes, cathodes, and magnetostrictive devices.

Further information under:	https://www.nickelcasting.com/nickel-alloys/commercially-pure-nickel/nickel-201/
Home page:	www.nickelcasting.com
Email:	ni@Nickelcasting.com

Technical Data

The following values are provided as general reference data for engineering review and procurement planning. Confirm final values against the applicable specification, product form, heat treatment condition and material certificate.

3. Chemical Composition (%)

Element	Content (%)
Nickel (Ni) + Cobalt	99.0 min
Copper (Cu)	0.25 max
Iron (Fe)	0.40 max
Manganese (Mn)	0.35 max
Carbon (C)	0.02 max
Silicon (Si)	0.35 max
Sulfur (S)	0.01 max

4. Standard Specifications

Product Form	ASTM / ASME Standards
Pipe & Tube (Seamless)	ASTM B161, ASME SB161
Plate, Sheet, Strip	ASTM B162, ASME SB162
Bar & Rod	ASTM B160, ASME SB160
Fittings	ASTM B366, ASME SB366
Forgings	ASTM B564, ASME SB564

5. Mechanical Properties - Typical at Room Temperature

Property	Typical Values (Room Temp)
Tensile Strength	50 - 70 ksi (345 - 485 MPa)
Yield Strength (0.2% Offset)	12 - 25 ksi (83 - 172 MPa)
Elongation	45 - 60 %
Hardness (Rockwell B)	40 - 70 HRB

Note: Values are typical or specification reference values. Purchase requirements should be confirmed against the required standard, drawing and material test report.

Applications and Ordering Information

Use this section to define inquiry requirements and accelerate technical confirmation for Nickel 201 products.

6. Typical Applications

Industry / Area	Typical Components
Industrial Service	*Note: Due to its lower carbon content, Nickel 201 typically exhibits slightly lower strength and hardness than Nickel 200.
Chemical / Process Equipment	Vessels and piping for caustic concentration and storage operating above 600 deg F (315 deg C).
Oil, Gas & Marine	Combustion boats, furnace fixtures, and other components requiring ductility at elevated temperatures.
High-Temperature / Power	Anode plates, passive cathodes, and plater bars used in high-temperature electronic devices.
Precision Components	Igniter components and other static aerospace parts exposed to high temperatures.

7. Available Supply Forms

Plate	Sheet	Strip
Pipe	Tube	Bar
Wire.	Forgings	Custom Cutting

8. Information to Include When Requesting a Quote

- Required grade: Nickel 201, with ASTM / ASME / AMS specification if applicable.
- Product form: pipe, tube, plate, sheet, bar, fittings, flanges, forgings or machined parts.
- Dimensions: outside diameter, wall thickness, length, width, thickness or drawing number.
- Quantity, delivery destination and required delivery schedule.
- Special requirements: cutting, machining, heat treatment, NDT, PMI, test report or material certificate.

Company Information	
Address	Shanghai, China
Email	ni@Nickelcasting.com
Home Page	www.nickelcasting.com
Product Page	https://www.nickelcasting.com/nickel-alloys/commercially-pure-nickel/nickel-201/

Disclaimer

This datasheet is provided for general reference only. Actual values may vary by product form, heat treatment, manufacturing condition and applicable specification. Please contact us for confirmed specifications, test reports and material certificates before ordering.