



Description

Nickel 201 is a commercially pure wrought nickel with a chemical composition similar to Nickel 200 but with a different carbon content. It is preferred for applications exposed to temperatures above 315°C. Its low base hardness and low work-hardening rate make it suited to spinning and cold forming operations.

Applications

Plater bars, electrical parts, caustic evaporators, combustion boats.

PHYSICAL PROPERTIES	
Density	8.88 g/cm ³
Curie temperature	360°C
Melting point	1446°C
Specific heat	0.24 J/g°C
Thermal coefficient of expansion (25°C to 100°C)	13 x 10 ⁻⁶ /°C

MECHANICAL PROPERTIES	
Tensile strength	403 Mpa
Yield strength	103 Mpa
Elongation	50%
Hardness, annealed sheet	55 HRB
Modulus of elasticity	207 Gpa

DC MAGNETIC PROPERTIES		
Temperature °C	Thermal conductivity W/m · K	Electrical resistivity nΩm
-196	—	16.6
-184	95.5	—
-73	—	48.2
-18	90.9	71.5
27	—	84.8
38	—	91.4
93	73.8	118.0
204	66.4	182.9
316	58.8	266.0
427	56.5	347.4
538	59.1	386.7
649	61.7	420.6
760	64.2	455.5
871	66.8	483.8
982	69.2	512.0
1093	—	523.7

TENSILE PROPERTIES - ANNEALED			
Temperature °C	Tensile strength MPa	Yield strength MPa	Elongation %
20	403	103	50
93	387	106	45
149	372	99	46
204	372	102	44
260	372	101	41
316	362	105	42
371	325	97	53
427	284	93	58
482	259	89	58
538	228	33.1	60
593	186	27	72
649	153	22.2	74

FORMS AVAILABLE:



Coil



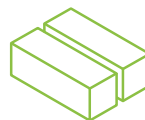
Sheet



Plate



Rod



Bar

All information is presented in good faith and based on published details. Nicofe Ltd is not responsible for the accuracy of this information or the suitability of the material for a particular application.

SPECIFICATIONS

ASTM B160 (bar, rod)
B162 (plate, strip, sheet)

AMS 5553 (sheet, strip)

UNS N02201

CHEMISTRY

28 Ni 58.6934	99%
27 Co 58.933	—
26 Fe 55.847	0.4%
Cu	0.25%
Mn	0.35%
C	0.02%
Si	0.35%
S	0.01%

28 Nickel Ni 58.6934	27 Cobalt Co 58.933	26 Iron Fe 55.847
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More than just metal

We're one of Europe's leading suppliers of premium quality refractory metals and alloys, soft magnetic alloys, and controlled expansion alloys. We hold a large stock of UK-certified, materials, all with full chain custody. With a deep technical understanding, comprehensive workshop facilities, and top accreditations, we help our customers get more from their materials.

Knowledge and advice

Our team understands exactly how our products are made, how they will behave in different situations, and how they should perform. Their knowledge and expertise helps save time, effort and cost by ensuring that all materials are sourced, processed and tested to perform in the most effective way.

We partner with leading academic institutions and scientific organisations that add value to our service and help develop solutions to the challenges impacting our customers. We're keen to share these unique insights in order to deliver practical operational improvements.

Workshop and machining

Our purpose-built facilities are centred around a fully equipped workshop designed to address almost any customer request:

- CNC Proturn RLX 1630 lathe for high precision rod and bar processing
- Saws to cut bars, plate and billets from Ø 2mm to Ø 270mm
- Guillotines for sheet and coil
- Grinding machinery
- De-coiler to check for imperfections before shipping
- Coil handling equipment to inspect product before dispatch
- Water jet and laser cutting
- Heat treatments

Quality control

All orders are fully tested before shipping.

Our state-of-the-art metrology lab features:

- Micrometers, verniers and gauges for all applications
- Surface roughness tester
- Straightness and roundness testing apparatus
- Magnetometers for measuring inductance, coercive and saturation
- Capabilities for evaluating properties such as CTE, tensile and elongation.

Best practice

We are committed to continuous improvement, reflected in our achievement of internationally-recognised industry accreditations. These are the foundation of best practice and provide you with solid assurances of competence and integrity:

- **AS9120** certified – a top aerospace industry award.
- **Green Mark level 1** accreditation – an environmental certification that supports greater sustainability.
- **JOSCAR** (the Joint Supply Chain Accreditation Register) accredited – an award that helps to streamline procurement processes.
- **Cyber Essentials** certified – a government-backed programme that provides security assurance of a supplier's digital infrastructure.



Discover how we can **optimise** operational performance

Contact chris@nicofe.com



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