Alloy 200 / 201 Nickel

Smiths Advanced Metals

Caustic Alkali Resistance

Commercially pure nickel, dual certified.

Alloy 200 (UNS N02200) and Alloy 201 (UNS N02201) are commercially pure nickel, combined in one dual-certified material with exceptional resistance to caustic alkalis.

In the annealed condition, its strength is similar to mild steel. The alloy offers good corrosion resistance in neutral and moderately reducing environments, and keeps good mechanical properties over a wide temperature range.

Typical properties are a tensile strength of 462 MPa, a yield strength of 148 MPa and elongation of 47%. Rod and bar are supplied to ASTM B160 / ASME SB160, DIN 17752 and ISO 9723.



Benefits

- Exceptional resistance to caustic alkalis
- Good properties over a wide temperature range
- Dual certified to Alloy 200 & 201

Key Applications

- Sodium hydroxide production
- Chemical processing & storage
- Food processing
- Fluorine generation
- Heat exchangers & pressure vessels

* Chemical Composition (weight %)

	Ni + Co	Cu	Fe	Mn	C	Si	S
min.	99.0						
max.		0.25	0.40	0.35	0.02**	0.35	0.01

* As per ASTM B160. ** Alloy 201 limit, no limit specified for Alloy 200

* Physical Properties

Density	8.89 g/cm³
Melting Range	1435–1446 °C
Modulus of Elasticity	205 GPa
Thermal Conductivity	70.3 W/m °C

* Alloy 200, at room temperature

Dual Certification

Alloy 201 is the low-carbon version of Alloy 200, with carbon limited to 0.02%. Dual certification means one stock meets the requirements of both grades.

We stock Alloy 200 / 201 nickel as round bar, hollow bar, sheet, strip and round tube, and process material in-house.

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bsi ISO 9001 Quality Management Systems CERTIFIED | AS/EN 9100 Aviation Space and Defence CERTIFIED | EN 9120 Aviation Space and Defence CERTIFIED

UKAS TESTING 1930

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.

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