

Technical datasheet

Alloy 230 / W-Nr. 2.4733

A nickel-chromium-tungsten-molybdenum alloy which combines outstanding high temperature strength and long-term resistance to oxidising and nitriding environments up to 1150°C with good thermal stability and excellent formability.

Available products

Product form	Size range from	Size range to
Sheet/plate	2.0 mm thickness	12.7 mm thickness
Bar	6.60 mm diameter	152.40 mm diameter

Chemical composition (%)

Ni	Cr	W	Mo	Co	Al	Mn	Ti	C
Balance	20.0-24.0	13.0-15.0	1.0-3.0	5.0 max	0.2-0.5	0.3-0.1.0	0.1 max	0.05-0.15

Major specifications

ASTM B435, B572 AMS 5878, 5891	UNS N06230
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Physical properties

Density	8.97 g/cm ³
Melting range	1300-1370°C

Mechanical properties – typical room temperature properties

Yield strength	417 MPa
Tensile strength	837 MPa
Elongation	47 %

Key attributes

Alloy 230 has excellent creep rupture strength and is particularly effective for long term service at operating temperatures above 650°C. It has excellent resistance to both air and combustion gas oxidising environments, outstanding nitridation resistance and good resistance to carburisation. It also has excellent long-term thermal stability and resistance to grain coarsening.

Owing to its good ductility Alloy 230 is readily fabricated and formed even by cold working making it suitable for a wide range of applications in the aerospace, power generation and thermal processing sectors. Please contact us for further details on forming, fabrication and welding consumables.

Applications

- Combustion cans
- Transition ducts
- Gas turbine components
- Furnace equipment (especially nitriding furnace internals)
- Heat treating baskets
- Furnace retorts and muffles

All information is subject to change without notice. The properties correspond to the material in the heading. They may vary for other specifications. Please contact us for more details.