





Udimet 400 Nickel Alloy

Categories: [Metal](#); [Nonferrous Metal](#); [Nickel Alloy](#)

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate 	1185 MPa @Temperature 540 °C	171900 psi @Temperature 1000 °F	Bar
	1310 MPa @Temperature 21.0 °C	190000 psi @Temperature 69.8 °F	Bar
Tensile Strength, Yield 	830 MPa @Strain 0.200 %, Temperature 540 °C	120000 psi @Strain 0.200 %, Temperature 1000 °F	Bar
	930 MPa @Strain 0.200 %, Temperature 21.0 °C	135000 psi @Strain 0.200 %, Temperature 69.8 °F	Bar
Elongation at Break 	26 % @Temperature 540 °C	26 % @Temperature 1000 °F	Bar
	30 % @Temperature 21.0 °C	30 % @Temperature 69.8 °F	Bar
Rupture Strength 	110 MPa @Temperature 870 °C, Time 3.60e+6 sec	16000 psi @Temperature 1600 °F, Time 1000 hour	Bar
	305 MPa @Temperature 760 °C, Time 3.60e+6 sec	44200 psi @Temperature 1400 °F, Time 1000 hour	Bar
	600 MPa @Temperature 650 °C, Time 3.60e+6 sec	87000 psi @Temperature 1200 °F, Time 1000 hour	Bar

Component Elements Properties	Metric	English	Comments
Aluminum, Al	1.5 %	1.5 %	
Boron, B	0.0080 %	0.0080 %	
Carbon, C	0.060 %	0.060 %	
Chromium, Cr	17.5 %	17.5 %	
Cobalt, Co	14 %	14 %	
Molybdenum, Mo	4.0 %	4.0 %	
Nickel, Ni	59.9 %	59.9 %	as balance
Niobium, Nb (Columbium, Cb)	0.50 %	0.50 %	
Titanium, Ti	2.5 %	2.5 %	
Zirconium, Zr	0.060 %	0.060 %	

[References](#) for this datasheet.

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.