2.4816

Abbreviation	EN Norm	ASTM / AISI	AFNOR	DIN Abbreviation	ISO	Other
NiCr15Fe8	NiCr15Fe	UNS N06600	NC15Fe	2.4816	NiCr15Fe8	

2.4816 Wire

Chemical analysis by European Norm EN 10088-1 in mass percent

C	Si	Ni	Mn	P	Cr	Fe	Ti
≤ 0.08	≤ 0.5-0.55	≥ 72.0	0.040	≤ 0.015	16.0-18.0	0.40-0.80	Rest

Cu	S
≤ 0.5	≤ 0.015

Diameter 0.02 – 4.00 mm

Application
2.4816 is categorized as a nickel-chrome alloy. As the name suggests, the alloy contains a large percentage of nickel (72%) as well as a sizeable portion of chrome (about 15.5%). It is resistant to oxidation, carburization, and nitridation. The distinguishing characteristics of this material however, are its excellent mechanical properties at both low as well as high temperatures.
The most common uses for 2.4816 are in the chemical industry, although it is also frequently used in the production of heat conductors and capacitors. Since 2.4816 is very heat resistant, it is used in the aerospace sector for turbine components and in the nuclear industry for the construction of reactors.

Resistance to Corrosion
The two main alloy components give the material high resistance to stress corrosion. The resistance to chlorine and hydrochloric acid is also considerable.

Thermal Treatment
This material is annealed in the temperature range 920°C to 1000°C. If it is to be used in heightened temperatures for extended time periods, solution annealing between 1080°C and 1150°C is recommended. The cooling process takes place immediately after annealing, and is preferably performed with water.

Weldability
2.4816 can be welded by any and all conventional methods.

Surface Finish

Drawn	Chemically purged	0.020 – 3.499 mm
Surface Ground	Chemically purged	3.500 – 4.000 mm

Delivery mode

As a ring

On assorted spools

Straightened

Axles

Diameter tolerances

Diameter (mm)	Tolerance (%)	Tolerance (µ)
0.020 – 0.249		± 1.0
0.250 – 0.399		± 1.5
0.400 – 1.500		± 2.0
1.500 – 4.000		± 2.5

Mechanical Properties

Condition at delivery (mm)	Ultimate Tensile Strength in cold twisted delivery condition (N/mm^2)
0.005 – 0.019	
0.020 – 0.199	
0.200 – 0.499	600 - 1600 (Depends on the diameter)
0.500 – 0.999	
1.000 – 1.999	
2.000 – 4.000	

Physical Properties

Density		8.47	g/cm^3
Coefficient of Thermal Expansion	20 ºC – 200 ºC	14.10	$10^{-6}/K$
Specific Heat Capacity	20 ºC	455	J/kgK
Thermal Conductivity	20 ºC	14.80	W/mK
Specific Electric Resistance	20 ºC	1.03	$\Omega\ mm^2/m$
Young's Modulus	20 ºC	214.00	GPa