BIBUS METALS

Technical datasheet Alloy 800H/HT / W-Nr.1.4876/1.4958/1.4959

A nickel-iron-chromium alloy with good creep rupture strength combined with excellent high temperature corrosion resistance used widely in chemical processing and heat treatment equipment.

Available products

Product form	Size	Size range to
Sheet/plate	0.5 mm thickness	15.0 mm thickness
Bar	8.0 mm diameter	160.0 mm diameter
Tube/pipe	17.1 mm outside diameter	219.1 mm outside diameter

Chemical composition (%)

	Ni	Fe	Cr	Al	Ti	Al+Ti	C
800H	30.0-35.0	39.5 min	19.0-23.0	0.15-0.60	0.15-0.60	0.30-1.20	0.05-0.10
800HT	30.0-35.0	39.5 min	19.0-23.0	0.25-0.60	0.25-0.60	0.85-1.20	0.06-0.10

Major specifications

ASTM B163, B407, B408, B409, B564, B829	UNS N08810, N08811
DIN 17459, 17460	BS 3072, 3074, 3076

Physical properties

Density	7.94 g/cm^3
Melting range	1357-1385°C

Mechanical properties – typical room temperature properties

Yield strength	170 MPa
Tensile strength	450-700 MPa
Elongation	35 %

Key attributes

Alloy 800H/HT has excellent resistance to oxidation and other forms of high temperature corrosion such as carburisation, sulphidation and nitridation thanks to the high content of Nickel and Chromium.

The high strength results from close control of the contents of Aluminium and Titanium combined with a high temperature annealing process to achieve a coarse grain structure (ASTM grain size 5 or coarser).

Alloy 800H/HT is highly fabricable and is readily formed by either hot or cold working processes. It is machinable and can be welded by conventional processes and procedures. Please contact us for further details on forming, fabrication and welding consumables.

Applications

Furnace equipment – furnace muffles, supports, baskets, burner components

Reformer tubes

Chemical process equipment – heat exchangers, vessels, steam generator tubing

Sheathing tubes

BIBUS METALS | info@bibusmetals.com | www.bibusmetals.com