Technical datasheet — Alloy 330/DS W-Nr. 1.4886/1.4862

A nickel-iron-chromium alloy with excellent resistance to oxidising and carburising atmospheres combined with good elevated temperature mechanical properties.

Available products

Product form	Size range from	Size range to
Sheet/plate	2.0 mm thickness	20.0 mm thickness
Bar	8.0 mm diameter	100.0 mm diameter

Chemical composition (%)

	Fe	Ni	Cr	Si	Mn	S	C	Others
330	Bal	34-37	17-20	0.75-1.50	2.0 max	.03 max	.08 max	P=.03max,
DS	Bal	34.5-41.0	17-19	1.90-2.60	.80-1.50	.03 max	.10 max	Cu=.5 max, S=.03max

Major specifications

ASTM B511, B512, B535, B546, B710, B8296
AMS 5592, 5716,

UNS N08330

Physical properties – Alloy 330

Density	8.08 g/cm^3
Melting range	1380-1420°C

Alloy DS

Density	7.86 g/cm^3
Melting range	1330-1400°C

Mechanical properties – typical room temperature properties

Yield strength	270 MPa
Tensile strength	585 MPa
Elongation	45 %

Key attributes

A nickel-iron-chromium alloy with an addition of silicon for enhanced oxidation resistance. It has good strength at high temperatures and excellent resistance to carburising and oxidising atmospheres. The microstructure remains stable during long-term exposure to high temperature. As a result of these combined properties Alloy 33/DS is used widely in industrial furnaces and heat treatment systems.

Alloy 330/DS 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 muffles and retorts
Heat treatment baskets
Radiant heater tubes
Salt pot furnaces and salt baths

Do you require further information or a quotation?
Please contact us…
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