

Haynes HR-120

Haynes HR-120 is a solid-solution-strengthened heat-resistant alloy providing excellent strength at elevated temperature combined with very good resistance to carburizing and sulfidizing environments. Its oxidation resistance is comparable to Incoloy 330, but its strength at high temperature up to 1095°C is significantly higher .

Chemical Composition, %

element	Cr	Ni	Fe	Nb+Ta	Mo	W	Co	Cu	Al	Ti	B	N	C	Mn	Si	P	S
min.	23.0	35.0	bal.	0.40								0.15	0.02				
max.	27.0	39.0		0.90	2.50	2.50	3.0	0.50	0.40	0.20	0.010	0.30	0.10	1.50	1.0	0.040	0.030

Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.

Designation and standards

National Standards	Material designation	Chemical composition	Forgings	Rod and bar	Plate and sheet	Strip	Seamless tube
ASTM ASME SAE	UNS N08120		B564 SB564	B408 SB408 B472 SB472 AMS 5891	B409 SB409 AMS 5916		B407 SB407 B163 SB163
GE	HR-120		B50A922				
DIN	2.4854 NiFe33Cr25Co						
GB/T	GH3922, GH922						

Density 8.07g/cm³

Corrosion resistance

- good resistance to carburizing and sulfidizing environments
- good resistance to oxidation

Applications

Typical applications are:

- waste incinerators
- recuperators
- fluidized bed components
- muffles and retorts