

Main characteristics of Ni-Cr and Ni-Cr-Fe electric heating alloys

Alloy Nomenclature		Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35	Cr20Ni30
Performance						
Main Chemical composition	Ni	Rest	Rest	55.0-61.0	34.0-37.0	30.0-34.0
	Cr	20.0-23.0	28.0-31.0	15.0-18.0	18.0-21.0	18.0-21.0
	Fe	≤1.0	≤1.0	Rest	Rest	Rest
Max. continuous service temp. of element		1200	1250	1150	1100	1100
Resistivity at 20°C (μΩ·m)		1.09	1.18	1.12	1.0	1.04
Density (g/cm ³)		8.40	8.10	8.20	7.90	7.90
Thermal conductivity (KJ/m·h·°C)		60.3	45.2	45.2	43.8	43.8
Coefficient of lines expansion (α×10 ⁻⁶ /°C)		18.0	17.0	17.0	19.0	19.0
Melting point (approx.)(°C)		1400	1380	1390	1390	1390
Elongation at rupture (%)		>20	>20	>20	>20	>20
Micrographic structure		austenite	austenite	austenite	austenite	austenite
Magnetic properties		nonmagnetic	nonmagnetic	Weak magnetic	Weak magnetic	Weak magnetic

