

Ni60Cr15

Nickel-Chromium Alloy

RESISTANCE ALLOYS

W.N: 2.4867
DIN: NiCr6015
UNS: N06004

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Ni60Cr15 is an austenitic nickel-chromium alloy suitable for temperature applications up to 1150°C.

This alloy is characterized by high resistivity, good oxidation resistance, very good form stability, good ductility after use and excellent weldability.

Ni60Cr15 is used for electric heating elements in domestic and industrial appliances.

Typical applications: potentiometers, heavy-duty resistors, tubular heaters, electric furnaces, grills, hot plates, toasters, storage heaters, fan heaters, hand dryers, etc.

1. Chemical composition

Nom. composition, %	C	Si	Mn	Ni	Cr	Al	Fe	Cu
min	-	1.00	-	59.00	14.00	-	Bal	-
max	0.10	1.75	1.00	-	17.00	0.30		0.50

2. Mechanical properties

Wire size, mm	Yield Strength, $R_{p0.2}$ (MPa)	Tensile Strength, R_m (MPa)	Hardness, HV	Elongation, A (%)
1.00	370	750	180	≥ 18

3. Physical properties

Density, g/cm ³	8.20
Electrical resistivity at 20°C, Ω mm ² /m	1.13
Thermal conductivity at 20°C, W/mk	13.40
Melting point, °C	1390
Max operating temperature, °C	1150

Creep strength, MPa R_p 1.0/10 ³ h	600°C	80.00
	800°C	15.00
	1000°C	4.00
Magnetic properties		nonmagnetic

4. Temperature factor of resistivity

Temperature, °C	20	100	200	300	400	500	600	700	800	900	1000	1100
Kt	1.00	1.011	1.024	1.038	1.052	1.064	1.069	1.073	1.078	1.088	1.095	1.109

5. Coefficient of liner thermal expansion

Temperature, °C	20	200	400	500	600	800	1000
$\alpha \times 10^{-6}/K$	-	14.00	15.00	-	15.50	16.00	17.00

Note: All information enclosed in this datasheet is based on our best knowledge and is given as indicative. Other special requirements are subject to prior discussion and approval of Vojay. Please contact us for any additional information or request.