

FeCrAl 125

Iron-Chromium-Aluminium Alloy

RESISTANCE ALLOYS

W.N.: 1.4725
DIN: CrAl 14 4
UNS: K91670

FeCrAl 125

FeCrAl 125 is a ferritic iron-chromium-aluminium alloy (Cr content is around 15%) with high resistivity suitable for temperature applications up to 1050°C.

FeCrAl 125 is characterised by: high resistivity, good ther-

mal conductivity, low elongation at high temperature.

FeCrAl 125 is particularly specified for heating elements operating in the open, for breaking resistors, rheostats, tubes quartz, emergent heaters, heating cables, etc.

1. Chemical composition

Nominal composition, %	C	Si	Mn	Fe	Cr	Ni	Al
min	-	-	-	Bal.	14.00	-	4.00
max	0.08	0.70	0.50		16.00	0.40	5.50

2. Mechanical properties

Wire size, mm	Yield Strength, $R_{p0.2}$ (MPa)	Tensile Strength, R_m (MPa)	Hardness, HV	Elongation, A (%)
1.00	500	700	200	≥ 18

3. Physical properties

Density, g/cm³	7.30	Creep strength, MPa R _p 1.0/10³ h	600°C	16.00	
Electrical resistivity at 20°C, Ω mm²/m	1.25		800°C	4.00	
Thermal conductivity at 20°C, W/mk	15.40		1000°C	0.80	
Melting point, °C	1500	Magnetic properties			magnetic
Max operating temperature, °C	1050				

4. Temperature factor of resistivity

Temperature, °C	20	100	200	300	400	500	600	700	800	900	1000
Kt	1.000	1.005	1.013	1.025	1.042	1.063	1.090	1.112	1.130	1.135	1.140

5. Coefficient of liner thermal expansion

Temperature, °C	20	200	400	500	600	800	1000
$\alpha \times 10^{-6}/K$	-	11.00	12.00	-	13.00	14.00	15.00

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.