

1.4725 (CrAl 14 4)

Material Designation

1.4725 DIN

Standards

DIN 17470

Chemical Composition Mass-%, acc. to DIN 17470

Cr	Al	Fe
14,0	4,0	Bal.

Other elements may be added to meet physical and technological properties.

Properties

CrAl 14 4 is a stainless ferritic iron-chromium-aluminium alloy with high resistivity and good oxidation resistance. It is magnetic up to approx. 600 °C.

After service between 400 - 550 °C and above 1000 °C cold embrittlement can occur.

Delivery Condition

✖ annealed (+A)

Supply Form

Wire (on spool up to 3mm, coils, casks)
Bright bars, continuous cast billets

Application Area

Electrical applications and heat sources with operating temperatures up to 1000 °C¹. Suitable for use in air, oxygen or in gases containing sulphur.

Typical Applications

- ✖ High temperature load resistors
- ✖ Braking resistors
- ✖ Rheostats
- ✖ Heating cables
- ✖ Household applications

Mechanical Properties at room temperature

Dimension [mm]	Tensile strength [N/mm ²]	Elongation [%]
0,060 - 0,125	≥ 600	10
> 0,125 - 1,00	≥ 600	14
> 1,00	≥ 600	18
> 2,00	≥ 600	18

Physical properties

Temperature [°C]	20	200	400	600	800	1000	1100
Electrical resistivity [Ω mm ² /m]	1,25	1,27	1,30	1,34	1,39	1,42	1,44
Thermal conductivity [W/m·K]	15,0						
Specific heat capacity [kJ/kg·K]	0,48					0,65	
Melting temperature [°C]	1500						
Density [g/cm ³]	7,3						
Temperature [°C]	20-400	20-800	20-1000				
Thermal expansion coeff. x [10^{-6} /K]	12	14	15				

¹Temperature valid for wire > 2 mm in air.

Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

Innovation

- Fully automated phased-array-ultrasonic testing up to dia. 1000 mm
- CO₂-reduction by innovative heat treatment solutions

Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

Your personal contact:

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