

**Main characteristics of Fe-Cr-Al electric heating wires**

Alloy Nomenclature Performance		FECRAL 13/4	FECRAL 25/5	FECRAL 21/6	FECRAL 23/5	FECRAL 21/4	FECRAL 21/6 NB	FECRAL 27/7 Mo2
Main	Cr	12.0-15.0	23.0-26.0	19.0-22.0	20.5-23.5	18.0-21.0	21.0-23.0	26.5-27.8
Chemical	Al	4.0-6.0	4.5-6.5	5.0-7.0	4.2-5.3	3.0-4.2	5.0-7.0	6.0-7.0
composition	Re	opportune	opportune	opportune	opportune	opportune	opportune	opportune
	Fe	Rest	Rest	Rest	Rest	Rest	Rest	Rest
							Nb0.5	Mo1.8-2.2
Max. continuous service temp. of element		950	1250	1250	1250	1100	1350	1400
Resistivity at 20°C ($\mu\Omega \cdot m$)		1,25	1,42	1,42	1,35	1,23	1,45	1,53
Density (g/cm^3)		7,4	7,1	7,16	7,25	7,35	7,1	7,1
Thermal conductivity($KJ/m \cdot h \cdot ^\circ C$)		52,7	46,1	63,2	60,2	46,9	46,1	45,2
Coefficient of lines expansion($\alpha \times 10^{-6}/^\circ C$)		15,4	16	14,7	15	13,5	16	16
Melting point (approx.) ($^\circ C$)		1450	1500	1500	1500	1500	1510	1520
Tensile strength (N/mm^2)		580-680	630-780	630-780	630-780	600-700	650-800	680-830
Elongation at rupture(%)		>16	>12	>12	>12	>12	>12	>10
Variation of area(%)		65-75	60-75	65-75	65-75	65-75	65-75	65-75
Bending frequency (F/R)		>5	>5	>5	>5	>5	>5	>5
Hardness(H.B.)		200-260	200-260	200-260	200-260	200-260	200-260	200-260
continuous service time(Hours/ $^\circ C$)		--	$\geq 80/1300$	$\geq 80/1300$	$\geq 80/1300$	$\geq 80/1250$	$\geq 50/1350$	$\geq 50/1350$
Micrographic structure		Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Magnetic properties		Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic