Scott Precision Wire
End to end

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Cromaloy 5

Cromaloy 5 is able to withstand progressive oxidisation due to its resistance to oxide scaling and good thermal fatigue properties. It is used in a wide range of elements from industrial furnaces to domestic toasters.

Cromaloy 5 is available in sizes down to 0.06 mm.

Physical and Mechanical Properties

	Units	
Maximum continuous operating temperature in air	°C	1250
Nominal composition	%	Ni 80 Cr 20
Density at 20°C	g/cm³	8.3
Resistivity at 20°C	µΩcm	109
Thermal conductivity at 20°C	W/mK	14.6
Specific heat capacity at 20°C	kJ/kgK	0.420
Melting point (approx.)	°C	1400
Tensile strength R_m, 0.5 mm wire – annealed	N/mm²	610
Elongation at break, 0.5 mm wire - annealed	%	> 25

Temperature dependant Factors for Cromaloy 5

Reference temperature 20°C

Temp °C	200	400	500	600	800	1000	1200
Temp °F	392	752	932	1112	1472	1832	2192
Resistivity Factor	1.015	1.034	1.043	1.034	1.029	1.039	1.058
Coefficient of thermal expansion (10^{-6}/K)	14.0	15.0	15.4	15.5	16.0	17.0	

The figures given in these tables represent nominal or typical values.