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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/mm ²	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	14.0	15.0	15.4	15.5	16.0	17.0		
thermal								
expansion (10 ⁻⁶ /K)								

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

Information contained within this technical data sheet is based upon the general experience of Scott Precision Wire Ltd and is believed to be correct at the time of issue. No warranty is given or is to be implied from the details above. Customers are advised to carry out independent tests in order to determine the suitability of any Scott Precision Wire Ltd product for an application.