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AMS 5699, Inconel X-750
 Material Notes

Component	Wt. %	Component	Wt. %	Component	Wt. %
Al	0.4 - 1	Cu	Max 0.5	Ni	Min 70
C	Max 0.08	Fe	5 - 9	S	Max 0.01
Co	Max 1	Mn	Max 1	Si	Max 0.5
Cr	14 - 17	Nb	0.7 - 1.2	Ti	2.25 - 2.75

Physical Properties	Metric	English	Comments
Density	8.28 g/cc	0.299 lb/in ³	
Mechanical Properties			
Tensile Strength, Ultimate	1250 MPa	181000 psi	Precipitation Hardened. Value at room temperature.
Tensile Strength, Ultimate at Elevated Temperature	1120 MPa	162000 psi	Precipitation Hardened prior to test; 550°C
Tensile Strength, Yield	850 MPa	123000 psi	Precipitation Hardened. Value at room temperature; 0.2% offset.
Tensile Strength, Yield at Elevated Temperature	760 MPa	110000 psi	Precipitation Hardened prior to test; 0.2% offset; 550°C
Elongation at Break	30 %	30 %	Precipitation Hardened
Elongation at Break at Elevated Temperature	22 %	22 %	Precipitation Hardened prior to test.; 550°C
Electrical Properties			
Electrical Resistivity	0.000122 ohm-cm	0.000122 ohm-cm	
Magnetic Permeability	1.0035	1.0035	at 200 oersted (15.9 kA/m)
Curie Temperature	-125 °C	-193 °F	
Thermal Properties			
CTE, linear 20°C	12.6 µm/m-°C	7 µin/in-°F	20-100°C
Specific Heat Capacity	0.431 J/g-°C	0.103 BTU/lb-°F	
Thermal Conductivity	12 W/m-K	83.3 BTU-in/hr-ft ² -°F	
Melting Point	1390 - 1430 °C	2530 - 2610 °F	
Solidus	1390 °C	2530 °F	
Liquidus	1430 °C	2610 °F	