

ULTIMET[®] alloy

Physical Properties

Physical Property	British Units		Metric Units	
Density	RT	0.306 lb/in. ³	RT	8.47 g/cm. ³
Electrical Resistivity	RT	34.3 μohm.in	RT	0.87 μohm.m
	200°F	35.2 μohm.in	100°C	0.89 μohm.m
	400°F	36.7 μohm.in	200°C	0.93 μohm.m
	600°F	38.2 μohm.in	300°C	0.96 μohm.m
	800°F	39.6 μohm.in	400°C	1.00 μohm.m
	1000°F	40.9 μohm.in	500°C	1.03 μohm.m
	-	-	600°C	1.05 μohm.m
Thermal Conductivity	RT	87 Btu.in/h.ft ² .°F	RT	12.3 W/m.°C
	200°F	95 Btu.in/h.ft ² .°F	100°C	13.8 W/m.°C
	400°F	109 Btu.in/h.ft ² .°F	200°C	15.6 W/m.°C
	600°F	123 Btu.in/h.ft ² .°F	300°C	17.5 W/m.°C
	800°F	138 Btu.in/h.ft ² .°F	400°C	19.4 W/m.°C
	1000°F	155 Btu.in/h.ft ² .°F	500°C	21.5 W/m.°C
	-	-	600°C	23.9 W/m.°C
Thermal Diffusivity	RT	0.005 in. ² /s	RT	0.033 x 10 ⁻⁶ cm ² /s
	200°F	0.005 in. ² /s	100°C	0.035 x 10 ⁻⁶ cm ² /s
	400°F	0.006 in. ² /s	200°C	0.038 x 10 ⁻⁶ cm ² /s
	600°F	0.007 in. ² /s	300°C	0.042 x 10 ⁻⁶ cm ² /s
	800°F	0.007 in. ² /s	400°C	0.045 x 10 ⁻⁶ cm ² /s
	1000°F	0.007 in. ² /s	500°C	0.047 x 10 ⁻⁶ cm ² /s
	-	-	600°C	0.050 x 10 ⁻⁶ cm ² /s
Mean Coefficient of Thermal Expansion	78-200°F	7.2 μin/in.°F	26-100°C	13.0 μm/m.°C
	78-400°F	7.5 μin/in.°F	26-200°C	13.4 μm/m.°C
	78-600°F	7.8 μin/in.°F	26-300°C	14.0 μm/m.°C
	78-800°F	8.0 μin/in.°F	26-400°C	14.3 μm/m.°C
	78-1000°F	8.2 μin/in.°F	26-500°C	14.8 μm/m.°C
	78-1200°F	8.4 μin/in.°F	26-600°C	15.0 μm/m.°C
	78-1400°F	8.8 μin/in.°F	26-700°C	15.4 μm/m.°C
	78-1600°F	9.1 μin/in.°F	26-800°C	16.1 μm/m.°C
Specific Heat	100°F	0.110 Btu/lb.°F	RT	456 J/kg.°C
	200°F	0.112 Btu/lb.°F	100°C	470 J/kg.°C
	400°F	0.116 Btu/lb.°F	200°C	482 J/kg.°C
	600°F	0.121 Btu/lb.°F	300°C	504 J/kg.°C
	800°F	0.127 Btu/lb.°F	400°C	525 J/kg.°C
	1000°F	0.133 Btu/lb.°F	500°C	545 J/kg.°C
	-	-	600°C	573 J/kg.°C
Dynamic Modulus of Elasticity	RT	33.2 X 10 ⁶ psi	RT	229 GPa
	200°F	32.6 X 10 ⁶ psi	100°C	224 GPa
	400°F	31.2 X 10 ⁶ psi	200°C	216 GPa
	600°F	29.9 X 10 ⁶ psi	300°C	208 GPa
	800°F	28.6 X 10 ⁶ psi	400°C	199 GPa
	1000°F	27.4 X 10 ⁶ psi	500°C	192 GPa
	1200°F	26.1 X 10 ⁶ psi	600°C	184 GPa
Melting Range	2430-2470°F	-	1332-1354°C	-

RT= Room Temperature

