

HAYNES<sup>®</sup> R-41 alloy

Physical Properties

Physical Property	British Units		Metric Units	
<b>Density</b>	70°F	0.298 lb/in <sup>3</sup>	21°C	8.25 g/cm <sup>3</sup>
<b>Melting Temperature</b>	2250-2535°F	-	1232-1391°C	-
<b>Mean Coefficient of Thermal Expansion</b>	70-1000°F	7.5 μin/in -°F	21-538°C	13.5 x 10 <sup>-6</sup> m/m·°C
	70-1200°F	7.8 μin/in -°F	21-649°C	14.0 x 10 <sup>-6</sup> m/m·°C
	70-1400°F	8.2 μin/in -°F	25-760°C	14.8 x 10 <sup>-6</sup> m/m·°C
	70-1500°F	8.5 μin/in -°F	25-816°C	15.2 x 10 <sup>-6</sup> m/m·°C
	70-1600°F	8.8 μin/in -°F	25-871°C	15.7 x 10 <sup>-6</sup> m/m·°C
	70-1700°F	9.1 μin/in -°F	25-927°C	16.3 x 10 <sup>-6</sup> m/m·°C
	70-1800°F	9.4 μin/in -°F	25-982°C	16.8 x 10 <sup>-6</sup> m/m·°C
<b>Thermal Conductivity</b>	300°F	80 Btu-in/ft <sup>2</sup> -hr-°F	149°C	11.5 W/m-°C
	400°F	87 Btu-in/ft <sup>2</sup> -hr-°F	204°C	12.5 W/m-°C
	500°F	95 Btu-in/ft <sup>2</sup> -hr-°F	260°C	13.6 W/m-°C
	600°F	102 Btu-in/ft <sup>2</sup> -hr-°F	316°C	14.7 W/m-°C
	800°F	117 Btu-in/ft <sup>2</sup> -hr-°F	427°C	16.8 W/m-°C
	1000°F	131 Btu-in/ft <sup>2</sup> -hr-°F	538°C	18.8 W/m-°C
	1100°F	139 Btu-in/ft <sup>2</sup> -hr-°F	593°C	20.0 W/m-°C
	1200°F	146 Btu-in/ft <sup>2</sup> -hr-°F	649°C	21.0 W/m-°C
	1300°F	153 Btu-in/ft <sup>2</sup> -hr-°F	704°C	22.0 W/m-°C
	1400°F	161 Btu-in/ft <sup>2</sup> -hr-°F	760°C	23.1 W/m-°C
	1500°F	168 Btu-in/ft <sup>2</sup> -hr-°F	816°C	24.1 W/m-°C

	1600°F	175 Btu-in/ft <sup>2</sup> -hr- °F	871°C	25.1 W/m-°C
<b>Specific Heat</b>	70°F	0.108 Btu/lb.-°F	21°C	452 J/kg-°C
<b>Electrical Resistivity</b>	32°F	50.0 μohm-in	0°C	127.0 μohm-cm
<b>Magnetic Permeability</b>	70°F	<1.002 at 200 oersteds	21°C	<1.002 at 200 oersteds

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