

HAYNES[®] 75 alloy

Physical Properties

| Physical Property | British Units | | Metric Units | |
|---------------------------------------|---------------|-----------------------------------|--------------------------|--------------|
| | Density | RT | 0.302 lb/in ³ | RT |
| Melting Range | 2445-2515°F | - | 1340-1380°C | - |
| Electrical Resistivity | 400°F | 44.1 μohm-in | 200°C | 112μohm-cm |
| | 800°F | 46.0 μohm-in | 400°C | 117 μohm-cm |
| | 1000°F | 45.5 μohm-in | 600°C | 115 μohm-cm |
| | 1200°F | 45.3 μohm-in | 700°C | 115 μohm-cm |
| | 1400°F | 45.3 μohm-in | 800°C | 115 μohm-cm |
| | 1600°F | 45.3 μohm-in | 900°C | 115 μohm-cm |
| | 1800°F | 45.6 μohm-in | 1000°C | 116 μohm-cm |
| Thermal Conductivity | 800°F | 133 Btu-in/ft ² -hr-°F | 400°C | 18.6 W/m-°C |
| | 1000°F | 149 Btu-in/ft ² -hr-°F | 600°C | 22.7 W/m-°C |
| | 1200°F | 164 Btu-in/ft ² -hr-°F | 700°C | 24.7 W/m-°C |
| | 1400°F | 179 Btu-in/ft ² -hr-°F | 800°C | 26.5 W/m-°C |
| | 1600°F | 193 Btu-in/ft ² -hr-°F | 900°C | 28.4 W/m-°C |
| | 1800°F | 207 Btu-in/ft ² -hr-°F | 1000°C | 30.1 W/m-°C |
| Mean Coefficient of Thermal Expansion | 70-800°F | 7.9 μin/in -°F | 20-500°C | 14.3 μm/m-°C |
| | 70-1000°F | 8.2 μin/in -°F | 20-600°C | 15.0 μm/m-°C |
| | 70-1200°F | 8.5 μin/in -°F | 20-700°C | 15.4 μm/m-°C |
| | 70-1400°F | 8.9 μin/in -°F | 20-800°C | 16.5 μm/m-°C |
| | 70-1600°F | 9.4 μin/in -°F | 20-900°C | 17.1 μm/m-°C |
| | 70-1800°F | 10.3 μin/in -°F | 20-1000°C | 18.2 μm/m-°C |
| Dynamic Modulus of Elasticity | 70°F | 32.0 x 10 ⁶ psi | 20°C | 221 GPa |
| | 400°F | 30.5 x 10 ⁶ psi | 200°C | 210 GPa |
| | 800°F | 28.2 x 10 ⁶ psi | 400°C | 197 GPa |
| | 1000°F | 27.0 x 10 ⁶ psi | 600°C | 181 GPa |
| | 1200°F | 25.5 x 10 ⁶ psi | 700°C | 173 GPa |
| | 1400°F | 24.6 x 10 ⁶ psi | 800°C | 165 GPa |
| | 1600°F | 22.6 x 10 ⁶ psi | 900°C | 153 GPa |
| | 1800°F | 20.5 x 10 ⁶ psi | 1000°C | 140 GPa |

RT = Room Temperature