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Tantalum, Ta (wt 100%)
 Material Notes

| Physical Properties | Metric | English |
|---|------------------|-----------------------------------|
| Density | | 0.602 lb/in ³ |
| Mechanical Properties | | |
| Hardness, Brinell | 195 | 195 |
| Hardness, Rockwell A | 56 | 56 |
| Hardness, Rockwell B | 92 | 92 |
| Hardness, Rockwell C | 12 | 12 |
| Hardness, Vickers | 200 | 200 |
| Tensile Strength, Ultimate | 900 MPa | 131000 psi |
| Modulus of Elasticity | 186 GPa | 27000 ksi |
| Poisson's Ratio | 0.35 | 0.35 |
| Fatigue Strength | 230 MPa | 33400 psi |
| Shear Modulus | 69 GPa | 10000 ksi |
| Electrical Properties | | |
| Electrical Resistivity | 1.25e-005 ohm-cm | 1.25e-005 ohm-cm |
| Magnetic Susceptibility | 9e-007 | 9e-007 |
| Critical Magnetic Field Strength, Oersted | 823 - 835 | 823 - 835 |
| Critical Superconducting Temperature | 4.43 - 4.51 K | 4.43 - 4.51 K |
| Thermal Properties | | |
| Heat of Fusion | 170 J/g | 73.1 BTU/lb |
| CTE, linear 20°C | 6.5 μm/m-°C | 3.61 μin/in-°F |
| CTE, linear 250°C | 6.6 μm/m-°C | 3.67 μin/in-°F |
| CTE, linear 500°C | 6.7 μm/m-°C | 3.72 μin/in-°F |
| CTE, linear 1000°C | 6.96 μm/m-°C | 3.87 μin/in-°F |
| Heat Capacity | 0.153 J/g-°C | 0.0366 BTU/lb-°F |
| Thermal Conductivity | 54.4 W/m-K | 378 BTU-in/hr-ft ² -°F |
| Melting Point | 2996 °C | 5420 °F |
| Optical Properties | | |
| Emissivity (0-1) | 0.2 | 0.2 |
| Emissivity (0-1) | 0.49 | 0.49 |