



Properties of Paliney® 2000

Paliney 2000 is a patented* palladium, silver, copper alloy developed by Deringer Ney to have mechanical and environmental properties rivaling Deringer Ney's well known Paliney 6 alloy but at a lower cost. It offers improved electrical conductivity and is being used successfully in hearing aid and sliding contact applications.

Mechanical and Electrical Properties Wire, 0.003" – 0.020" Strip, 0.003" – 0.020"

| Properties of Paliney 2000 | | Condition | | | |
|---|-------|---|-----------|------------------|--------------|
| | | Cold Worked | Annealed | Stress Relieved | Age Hardened |
| Ultimate Tensile Strength (ksi) | Wire | 150 – 200 | 110 – 140 | 150 – 200 | 150 – 210 |
| | Strip | 130 – 160 | 90 – 140 | --- | 130 – 200 |
| Yield Strength (ksi) | Wire | ---- | ---- | 115 – 135 | ---- |
| | Strip | ---- | ---- | ---- | 110 – 160 |
| Elongation (% in 2") | Wire | < 2 | 1 – 20 | < 2 | < 5 |
| | Strip | < 2 | 1 – 40 | ---- | 1 – 10 |
| Hardness (Knoop) | Wire | 250 – 370 | 200 – 300 | 290 – 370 | 290 – 360 |
| | Strip | 250 – 330 | 180 – 260 | ---- | 300 – 360 |
| Electrical Conductivity (%IACS, Nominal) | | ---- | ---- | ---- | 13.5 |
| Electrical Resistivity (microhm-cm, Nominal) | | ---- | ---- | ---- | 12.8 |
| Bend Formability (R / t, 90° Bad Way) Strip | | ---- | < 0.3 | ---- | ---- |
| Physical Properties and Elevated Temperature Properties | | | | | |
| Modulus of Elasticity (x10 ⁶ psi, Nominal) | 15 | Stress Relaxation Resistance (Stress Remaining after 3000 hr @ 200°C and 75% of Y.S.) | | > 80% | |
| Density (dwt / in ³ , Nominal) | 108.8 | Contact Resistance (Increase in static contact resistance after aging in air for 1000 hr @ 150°C) | | < 100 milli ohms | |

*US Patent 5,833,774

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