

Sigma PMV Resistivity Quick-Reference (with Ranges)

Compiled from CRC/WEL (via Wikipedia data page) and typical alloy datasheets

What the PMV number means: Sigma Metalytics PMV displays the material's *electrical resistivity* in $\mu\Omega\text{ cm}$ (i.e., $1.00\ \mu\Omega\text{ cm} = 1.00 \times 10^{-8}\ \Omega\text{ m}$), typically referenced at $\sim 20\text{--}25\text{ }^\circ\text{C}$. Readings vary with purity, work-state, and temperature.

About the ranges: Pure elements are shown with a default $\pm 10\%$ band around the nominal $\sim 293\text{ K}$ value to reflect ordinary variation (purity/temperature). Jewelry and engineering alloys are shown with practical ranges from datasheets and experience.

Material	Symbol/Type	Nominal ($\mu\Omega\text{ cm}$ @ $\sim 293\text{ K}$)	Typical Range ($\mu\Omega\text{ cm}$)	Notes
Elements (pure)				
Silver	Ag	1.59	1.43–1.75	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Copper	Cu	1.68	1.51–1.85	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Gold	Au	2.21	1.99–2.43	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Aluminium	Al	2.65	2.38–2.92	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Calcium	Ca	3.36	3.02–3.70	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Beryllium	Be	3.56	3.20–3.92	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Rhodium	Rh	4.30	3.87–4.73	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Magnesium	Mg	4.39	3.95–4.83	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Iridium	Ir	4.70	4.23–5.17	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Tungsten	W	5.28	4.75–5.81	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Molybdenum	Mo	5.34	4.81–5.87	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Zinc	Zn	5.90	5.31–6.49	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Cobalt	Co	6.24	5.62–6.86	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Cadmium	Cd	6.80	6.12–7.48	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Nickel	Ni	6.93	6.24–7.62	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Ruthenium	Ru	7.10	6.39–7.81	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Indium	In	8.00	7.20–8.80	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Osmium	Os	8.10	7.29–8.91	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Iron	Fe	9.70	8.73–10.67	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Platinum	Pt	10.60	9.54–11.66	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Palladium	Pd	10.73	9.66–11.80	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Tin	Sn	11.50	10.35–12.65	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Chromium	Cr	12.50	11.25–13.75	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Tantalum	Ta	13.50	12.15–14.85	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Gallium	Ga	14.00	12.60–15.40	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Niobium	Nb	15.20	13.68–16.72	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Rhenium	Re	17.20	15.48–18.92	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Vanadium	V	19.70	17.73–21.67	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Lead	Pb	20.80	18.72–22.88	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Uranium	U	28.00	25.20–30.80	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Hafnium	Hf	33.10	29.79–36.41	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Titanium	Ti	42.00	37.80–46.20	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Zirconium	Zr	42.10	37.89–46.31	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Yttrium	Y	59.60	53.64–65.56	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Lanthanum	La	61.50	55.35–67.65	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Mercury (liquid)	Hg	96.00	86.40–105.60	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Bismuth	Bi	130.00	117.00–143.00	Pure element; nominal 293 K; $\pm 10\%$ band reflects purity & temperature variation.
Alloys — Jewelry				
Coin Silver / 90% Ag	Alloy	2.15	1.90–2.40	90% Ag; Deringer–Ney typical values.
Sterling Silver (92.5% Ag)	Alloy	3.00	2.50–3.50	Ag 92.5% / Cu 7.5%; typical literature values.
22K Yellow Gold	Alloy	9.00	8.00–10.00	Au $\approx 91.7\%$, Ag+Cu; typical yellow alloy range.
22K Pink/Rose Gold	Alloy	10.00	9.00–11.00	Au $\approx 91.7\%$, slight Cu; typical rose alloy range.
22K White Gold	Alloy	11.00	10.00–12.00	Less common; Au $\approx 91.7\%$ with whitening additions.
18K Yellow Gold	Alloy	17.50	15.00–20.00	Au $\approx 75\%$, Ag+Cu; typical yellow alloy range.
18K Pink/Rose Gold	Alloy	20.00	18.00–22.00	Au $\approx 75\%$, Cu-rich; typical rose alloy range.
18K White Gold	Alloy	22.50	20.00–25.00	Au $\approx 75\%$, Ni/Pd + Zn/Cu; varies by recipe.
14K Yellow Gold	Alloy	30.00	25.00–35.00	Au $\approx 58.5\%$, Ag+Cu; typical yellow alloy range.
14K Pink/Rose Gold	Alloy	35.00	30.00–40.00	Au $\approx 58.5\%$, Cu-rich; typical rose alloy range.
14K White Gold	Alloy	40.00	35.00–45.00	Au $\approx 58.5\%$, Ni/Pd + Zn/Cu; varies by Ni vs Pd.
Alloys — Engineering				
Aluminium 6061-T6	Alloy	4.10	3.80–4.40	Al–Mg–Si; temper dependent.
Aluminium 7075-T6	Alloy	5.60	5.20–6.00	Al–Zn–Mg–Cu; temper dependent.
Brass 70/30 (Cartridge)	Alloy	6.75	6.00–7.50	Cu 70% / Zn 30%; typical range.
Yellow Brass 63/37	Alloy	7.50	6.50–8.50	Cu 63% / Zn 37%; typical range.
Bronze (Generic Cu–Sn 90/10)	Alloy	9.50	8.00–11.00	Common tin bronze; typical range.
Phosphor Bronze (Cu–Sn 94/6)	Alloy	10.50	9.00–12.00	Cu with 6% Sn; typical range.
Solder Sn63/Pb37 (eutectic)	Alloy	14.50	13.00–16.00	Electronics solder; typical range.
Nickel Silver 65/18/17	Alloy	25.00	22.00–28.00	Cu–Ni–Zn (no silver); typical range.
Stainless Steel 430	Alloy	62.50	55.00–70.00	Ferritic; typically lower than 304.
Stainless Steel 304	Alloy	70.00	60.00–80.00	Austenitic; composition & work-state dependent.
Stainless Steel 316	Alloy	77.50	70.00–85.00	Austenitic; Mo-bearing; slightly higher than 304.
Nichrome 80/20 (NiCr)	Alloy	102.50	95.00–110.00	High-resistance heater alloy; typical range.
Kanthal A1 (FeCrAl)	Alloy	140.00	130.00–150.00	Fe–Cr–Al heater alloy; typical range.

Sources: CRC Handbook / WebElements / Lange (via Wikipedia “Electrical resistivities of the elements (data page)”) for elemental nominals; Deringer–Ney and common jewelry alloy datasheets for silver/gold alloys; typical engineering references for brass/bronze/nickel silver; datasheets for Nichrome and Kanthal. Units are $\mu\Omega\text{ cm}$ at about 293.00 K.