

Metal	Temperature Range (^{°F}) (deg C)	Thermal Expansion (10 ⁻⁶ in/(in ^{°F})) (10-6 m/(m C))
Admiralty Brass	68 - 572	11.2
Aluminum	68 - 212	13.1
Aluminum Bronze	68 - 572	9.0
Aluminum Alloy - 2011		12.8
Aluminum Alloy - 2017		13.1
Aluminum Alloy - 2024		12.9
Aluminum Alloy - 3003		12.9
Aluminum Alloy - 5052		13.2
Aluminum Alloy - 5086		13.2
Aluminum Alloy - 6061		13.0
Aluminum Alloy - 7075		13.1
Antimony		5
Beryllium		6.7
Beryllium Copper	68 - 212	9.3
Bismuth		7.2
Cast Iron, grey	32 - 212	5.8
Cast Steel, 3% C		7.0
Chromium		3.3
Cobalt		6.7
Copper	68 - 572	9.8
Copper-Base Alloy - Manganese Bronze		11.8
Copper-Base Alloy - C1100 (Electrolytic tough pitch)		9.8
Copper-Base Alloy - C14500 (Free Machining Cu)		9.9
Copper-Base Alloy - C17200, C17300 (Beryllium Cu)		9.9
Copper-Base Alloy - C18200 (Chromium Cu)		9.8
Copper-Base Alloy - C18700 (Leaded Cu)		9.8
Copper-Base Alloy - C22000 (Commercial bronze, 90%)		10.2
Copper-Base Alloy - C23000 (Red brass, 85%)		10.4
Copper-Base Alloy - C26000 (Cartridge brass, 70%)		11.1
Copper-Base Alloy - C27000 (Yellow brass)		11.3
Copper-Base Alloy - C28000 (Muntz metal, 60%)		11.6
Copper-Base Alloy - C33000 (Low-leaded brass tube)		11.2
Copper-Base Alloy - C35300 (High-leaded brass)		11.3
Copper-Base Alloy - C35600 (Extra high-leaded brass)		11.4
Copper-Base Alloy - C36000 (Free machining brass)		11.4
Copper-Base Alloy - C36500 (Leaded Muntz metal)		11.6
Copper-Base Alloy - C46400 (Naval brass)		11.8
Copper-Base Alloy - C51000 (Phosphor bronze, 5% A)		9.9
Copper-Base Alloy - C54400 (Free cutting phos. bronze)		9.6
Copper-Base Alloy - C62300 (Aluminum bronze, 9%)		9.0
Copper-Base Alloy - C62400 (Aluminum bronze, 11%)		9.2
Copper-Base Alloy - C63000 (Ni-Al bronze)		9.0
Copper-Base Alloy - Nickel-Silver		9.0
Cupronickel	68 - 572	9.0
Ductile Iron, A536 (120-90-02)		5.9 - 6.2
Gold		7.9
Hastelloy C	70 - 200	5.3
Inconel	68 - 212	6.4
Incoloy	32 - 212	8.0
Iridium		3.3
Iron, nodular pearlitic	68 - 212	6.5
Iron, pure	68 - 212	6.8
Magnesium		14
Malleable Iron, A220 (50005, 60004, 80002)		7.5
Manganese		12
Manganese Bronze	68 - 572	11.8
Mild steel		5.9
Molybdenum		3.0
Monel	32 - 212	7.8
Nickel-Base Alloy - Nickel 200, 201, 205		8.5
Nickel-Base Alloy - Hastelloy C-22		6.9
Nickel-Base Alloy - Hastelloy C-276		6.2
Nickel-Base Alloy - Inconel 718		7.2
Nickel-Base Alloy - Monel		8.7
Nickel-Base Alloy - Monel 400		7.7
Nickel-Base Alloy - K500		7.6
Nickel-Base Alloy - R405		7.6
Nickel Wrought	77 - 212	7.4
Niobium (Columbium)		3.9
Red Brass	68 - 572	10.4
Osmium		2.8
Platinum		5
Plutonium		19.84
Potassium		46
Rhodium		4.4
Selenium		21
Silicon		2.8
Silver		11
Sodium		39
Stainless Steel - S30100		9.4
Stainless Steel - S30200, S30300, S30323		9.6
Stainless Steel - S30215		9.0

Stainless Steel - S30400, S30500		9.6
Stainless Steel - S30430		9.6
Stainless Steel - S30800		9.6
Stainless Steel - S30900, S30908		8.3
Stainless Steel - S31000, S31008		8.8
Stainless Steel - S31600, S31700		8.8
Stainless Steel - S31703		9.2
Stainless Steel - S32100		9.2
Stainless Steel - S34700		9.2
Stainless Steel - S34800		9.3
Stainless Steel - S38400		9.6
Stainless Steel - S40300, S41000, S41600, 41623		5.5
Stainless Steel - S40500		6.0
Stainless Steel - S41400		5.8
Stainless Steel - S42000, S42020		5.7
Stainless Steel - S42200		6.2
Stainless Steel - S42900		5.7
Stainless Steel - S43000, S43020, S43023		5.8
Stainless Steel - S43600		5.2
Stainless Steel - S44002, S44004		5.7
Stainless Steel - S44003		5.6
Stainless Steel - S44600		5.8
Stainless Steel - S50100, S50200		6.2
Tantalum		3.6
Thorium		6.7
Tin	32 - 212	12.8
Titanium	68 - 200	4.8
Titanium Alloy - Ti-5Al-2.5Sn		5.3
Ti-8Mn		6.0
Tungsten		2.5
Uranium		7.4
Vanadium		4.4
Wrought Carbon Steel	70 - 800	7.8
Yellow Brass	68 - 572	11.3
Zinc		19

- $T(^{\circ}C) = 5/9[T(^{\circ}F) - 32]$
- $1\text{ in (inch)} = 25.4\text{ mm}$
- $1\text{ ft (foot)} = 0.3048\text{ m}$