

Product	Linear Temperature Coefficient	
	- $\alpha$ -	
	$(10^{-6} m/m K)$	$(10^{-6} in/in ^\circ F)$
ABS (Acrylonitrile butadiene styrene) thermoplastic	73.8	41
ABS -glass fiber-reinforced	30.4	17
Acetal	106.5	59.2
Acetal - glass fiber-reinforced	39.4	22
Acrylic, sheet, cast	81	45
Acrylic, extruded	234	130
Alumina	5.4	3.0
Aluminum	22.2	12.3
Antimony	10.4	5.8
Arsenic	4.7	2.6
Barium	20.6	11.4
Beryllium	11.5	6.4
Beryllium Copper (Cu 75, Be 25)	16.7	9.3
Bismuth	13	7.3
Brass	18.7	10.4
Brick masonry	5.5	3.1
Bronze	18.0	10.0
Cadmium	30	16.8
Calcium	22.3	12.4
Carbon - diamond	1.2	0.67
Cast Iron Gray	10.8	6.0
Cellulose acetate (CA)	130	72.2
Cellulose acetate butyrate (CAB)	25.2	14

Cellulose nitrate (CN)	100	55.6
Cement	10.0	6.0
Cerium	5.2	2.9
Chlorinated polyvinylchloride (CPVC)	66.6	37
Chromium	6.2	3.4
Clay tile structure	5.9	3.3
Cobalt	12	6.7
Concrete	14.5	8.0
Concrete structure	9.8	5.5
Constantan	18.8	10.4
Copper	16.6	9.3
Corundum, sintered	6.5	3.6
Cupronickel 30%	16.2	9
Diamond	1.1	0.6
Dysprosium	9.9	5.5
Ebonite	76.6	42.8
Epoxy, castings resins & compounds, unfilled	55	31
Erbium	12.2	6.8
Ethylene ethyl acrylate (EEA)	205	113.9
Ethylene vinyl acetate (EVA)	180	100
Europium	35	19.4
Fluoroethylene propylene (FEP)	135	75
Gadolinium	9	5
Germanium	6.1	3.4
Glass, hard	5.9	3.3
Glass, Pyrex	4.0	2.2
Glass, plate	9.0	5.0

Gold	14.2	8.2
Granite	7.9	4.4
Graphite, pure	7.9	4.4
Hafnium	5.9	3.3
Hard alloy K20	6	3.3
Hastelloy C	11.3	6.3
Holmium	11.2	6.2
Ice	51	28.3
Inconel	12.6	7.0
Indium	33	18.3
Invar	1.5	0.8
Iridium	6.4	3.6
Iron, pure	12.0	6.7
Iron, cast	10.4	5.9
Iron, forged	11.3	6.3
Lanthanum	12.1	6.7
Lead	28.0	15.1
Limestone	8	4.4
Lithium	46	25.6
Lutetium	9.9	5.5
Magnesium	25	14
Manganese	22	12.3
Marble	5.5 - 14.1	3.1 - 7.9
Masonry	4.7 - 9.0	2.6 - 5.0
Mica	3	1.7
Molybdenum	5	2.8
Monel	13.5	7.5
Mortar	7.3 - 13.5	4.1-7.5
Neodymium	9.6	5.3

Nickel	13.0	7.2
Niobium (Columbium)	7	3.9
Nylon, general purpose	72	40
Nylon, Type 11, molding and extruding compound	100	55.6
Nylon, Type 12, molding and extruding compound	80.5	44.7
Nylon, Type 6, cast	85	47.2
Nylon, Type 6/6, molding compound	80	44.4
Osmium	5	2.8
Palladium	11.8	6.6
Phenolic resin without fillers	80	44.4
Plaster	16.4	9.2
Platinum	9.0	5.0
Plutonium	54	30.2
Polyallomer	91.5	50.8
Polyamide (PA)	110	61.1
Polycarbonate (PC)	70.2	39
Polycarbonate - glass fiber-reinforced	21.5	12
Polyester	123.5	69
Polyester - glass fiber-reinforced	25	14
Polyethylene (PE)	200	111
Polyethylene terephthalate (PET)	59.4	33
Polyphenylene - glass fiber-reinforced	35.8	20
Polypropylene (PP), unfilled	90.5	50.3

Polypropylene - glass fiber-reinforced	32	18
Polystyrene (PS)	70	38.9
Polysulfone (PSO)	55.8	31
Polyurethane (PUR), rigid	57.6	32
Porcelain	3.6	2.0
Potassium	83	46.4
Polyvinyl chloride (PVC)	110	61.1
Polyvinylidene fluoride (PVDF)	127.8	71
Porcelain	4.5	2.5
Potassium	83	46.1
Praseodymium	6.7	3.7
Promethium	11	6.1
Quartz	0.77 - 1.4	0.43 - 0.79
Rhenium	6.7	3.7
Rhodium	8	4.5
Rubber, hard	77	42.8
Ruthenium	9.1	5.1
Samarium	12.7	7.1
Sandstone	11.6	6.5
Scandium	10.2	5.7
Selenium	3.7	2.8
Silicon	5.1	1.7
Silver	19.5	10.7
Slate	10.4	5.8
Sodium	70	39.1
Solder 50 - 50	24.0	13.4
Steatite	8.5	4.7

Steel	13.0	7.3
Steel Stainless Austenitic (304)	17.3	9.6
Steel Stainless Austenitic (310)	14.4	8.0
Steel Stainless Austenitic (316)	16.0	8.9
Steel Stainless Ferritic (410)	9.9	5.5
Strontium	22.5	12.5
Tantalum	6.5	3.6
Tellurium	36.9	20.5
Terbium	10.3	5.7
Terne	11.6	6.5
Thallium	29.9	16.6
Thorium	12	6.7
Thulium	13.3	7.4
Tin	23.4	13.0
Titanium	8.6	4.8
Tungsten	4.3	2.4
Uranium	13.9	7.7
Vanadium	8	4.5
Vinyl Ester	16 - 22	8.7 - 12
Wood, fir	3.7	2.1
Wood, oak parallel to grain	4.9	2.7
Wood, oak across to grain	5.4	3.0
Wood, pine	5	2.8
Ytterbium	26.3	14.6
Yttrium	10.6	5.9
Zinc	29.7	16.5
Zirconium	5.7	3.2

- $T(^{\circ}C) = 5/9[T(^{\circ}F) - 32]$

- $1 \text{ in (inch)} = 25.4 \text{ mm}$

- $1 \text{ ft (foot)} = 0.3048 \text{ m}$

