

Thermal Conductivity

Material	Thermal Conductivity
Copper	0.941
3003 Aluminum	0.460
Cast Iron	0.112
304 Stainless Steel	0.036

Thermal Conductivity
- k -
(W/m.K)

Materials	Temperature (°F)		
	77	257	437
Acetone	0.16		
Acrylic	0.2		
Air	0.024		
Alcohol	0.17		
Aluminum	250	255	250
Aluminum Oxide	30		
Ammonia	0.022		
Antimony	18.5		
Argon	0.016		
Asphalt	1.26		
Balsa	0.048		
Bitumen	0.17		
Benzene	0.16		
Beryllium	218		
Brass	109		
Brick dense	1.6		
Brick work	0.5		
Cadmium	92		
Carbon	1.7		
Cement	1.01		
Cobalt	69		
Concrete	1.05		
Constantan	22		
Copper	401	400	398
Corian (ceramic filled)	1.06		
Cork	0.07		
Cotton	0.03		
Carbon Steel	54	51	47
Cotton Wool insulation Ether	0.029		
Ether	0.14		
Epoxy	0.35		
Felt insulation	0.04		
Foam Glass	0.045		
Gasoline	0.15		
Glass	1.05		
Glass Pearls, dry	0.18		
Glass Pearls, saturated	0.76		
Glass Wool Insulation	0.04		
Glycerol	0.28		
Gold	310	312	310
Helium	0.142		

Materials	Temperature (°F)		
	77	257	437
Hydrogen	0.168		
Ice	2.18		
Iridium	147		
Iron	80	68	60
Iron, wrought	59		
Iron, cast	55		
Kapok insulation	0.034		
Lead Pb	35		
Leather	0.14		
Limestone	1.1		
Magnesia insulation	0.07		
Magnesium	156		
Marble	3		
Mercury	8		
Methane	0.03		
Methanol	0.21		
Mica	0.75		
Molybdenum	138		
Monel	26		
Nickel	91		
Nitrogen	0.024		
Nylon 6	0.25		
Oil, machine	0.15		
Olive oil	0.17		
Oxygen	0.024		
Paper	0.05		
Paraffin Wax	0.25		
Platinum	70	71	72
Plywood	0.13		
Polyethylene HD	0.5		
Polystyrene expanded	0.03		
Porcelain	1.05		
PTFE	0.25		
PVC	0.19		
Pyrex glass	1.005		
Quartz mineral	3		
Rock Wool	0.045		
Sand, saturated	2.7		
Saw Dust	0.06		
Silicone Oil	0.1		
Silver	429		
Sodium	84		
Steel	46		
Stainless Steel	16	17	19
Straw Insulation	0.09		
Tin Sn	67		
Zinc Zn	116		
Vinyl Ester	0.25		
Water	0.58		
Water, Vapor (Steam)		0.016	
Wood	0.4		

1 W/(m.K) = 1 W/(m.°C) = 0.85984 kcal/(h.m.°C) = 0.5779 Btu/(ft.h.°F)



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