

NON-METALS

Material	Temperature (F)	(C)	E-Emissivity
Adobe	68	20	.90
Asbestos			
Board	100	38	.96
Cement	32-392	0-200	.96
Cement, Red	2500	1371	.67
Cement, White	2500	1317	.65
Cloth	199	93	.90
Paper	100-700	38-371	.93
Slate	68	20	.72
Asphalt, pavement	100	38	.93
Asphalt, tar paper	68	20	.93
Basalt	68	20	.72
Brick			
Red, rough	70	21	.93
Gault Cream	2500-5000	1371-2760	.26-.30
Fire Clay	2500	1371	.75
Lime Clay	2500	1371	.43
Fire Brick	1832	100	.75-.80
Magnesite, Refractory	1832	1000	.38
Gray Brick	2021	1100	.75
Silica, Glazed	2000	1093	.88
Silica, Unglazed	2000	1093	.80
Sandlime	2500-5000	1371-2760	.59-.63
Carborundum	1850	1010	.92
Ceramic			
Alumina on Inconel	800-2000	427-1093	.69-.45
Earthenware, Glazed	70	21	.90
Earthenware, Matte	70	21	.93
Greens No. 5210-2C	200-750	93-399	.89-.82
Coating No. C20A	200-750	93-399	.73-.80
Porcelain	72	22	.92
White Al ₂ O ₃	200	93	.90
Zirconia on Inconel	800-2000	427-1093	.62-.45
Clay	68	20	.39
" Fired	158	70	.91
" Shale	68	20	.69
" Tiles, Light Red	2500-5000	1371-2760	.32-.34
" Tiles, Dark Purple	2500-5000	1371-2760	.78
Concrete			
Rough	32-2000	0-1093	.94
Tiles, Natural	2500-5000	1371-2760	.63-.62
" Brown	2500-5000	1371-2760	.87-.83
" Black	2500-5000	1371-2760	.94-.91
Cotton Cloth	68	20	.77
Dolomite Lime	68	20	.41
Emery Corundum	176	80	.86
Glass			
Convex D	212	100	.80
Convex D	600	316	.82
Convex D	932	500	.76

Material	Temperature (F)	(C)	E-Emissivity
Nonex	212	100	.82
Nonex	939	500	.76
Smooth	32-200	0-93	.92-.94
Granite	70	21	.45
Gravel	100	38	.28
Gypsum	68	20	.80-.90
Ice, Smooth	32	0	.97
Ice, Rough	32	0	.98
Lacquer			
Black	200	93	.96
Blue, on Al Foil	100	38	.78
Clear, on Al Foil (2 coats)	200	93	.08 (.09)
Clear, on Bright Cu	200	93	.66
Clear, on Tarnished Cu	200	93	.64
Red, on Al Foil (2 coats)	200	93	.61 (.74)
White	200	93.	.95
White, on Al Foil (2 coats)	100	38	.69 (.88)
Yellow, on Al Foil (2 coats)	100	38	.57 (.79)
Lime Mortar	100-500	38-260	.90-.92
Limestone	100	38	.95
Marble, White	100	38	.95
" Smooth, White	100	38	.56
" Polished Gray	100	38	.75
Mica	100	38	.75
Oil on Nickel			
0.001 Film	72	22	.27
0.002 "	72	22	.46
0.005 "	72	22	.72
Thick "	72	22	.82
Oil, Linseed			
On Al Foil, uncoated	250	121	.09
On Al Foil, 1 coat	250	121	.56
On Al Foil, 2 coats	250	121	.56
On Polished Iron, .001 Film	100	38	.22
On Polished Iron, .002 Film	100	38	.45
On Polished Iron, .004 Film	100	38	.65
On Polished Iron, Thick Film	100	38	.83
Paints			
Blue, Cu2O3	75	24	.94
Black, CuO	75	24	.96
Green, Cu2O3	75	24	.92
Red, Fe2O3	75	24	.91
White, Al2O3	75	24	.94
White, Y2O3	75	24	.90
White, ZnO	75	24	.95
White, MgCO3	75	24	.91
White, ZrO2	75	24	.95
White, ThO2	75	24	.90
White, MgO	75	24	.91
White, PbCO3	75	24	.93
Yellow, PbO	75	24	.90
Yellow, PbCrO4	75	24	.93
Paints, Aluminum	100	38	.27-.67

Material	Temperature (F)	(C)	E-Emissivity
10% Al	100	38	.52
26% Al	100	38	.30
Dow XP-310	200	93	.22
Paints, Bronze	low	low	.34-.80
Gum Varnish (2 coats)	70	21	.53
Gum Varnish (3 coats)	70	21	.50
Cellulose Binder (2 coats)	70	21	.34
Paints, Oil			
All colors	200	93	.92-.96
Black	200	93	.92
Black Gloss	70	21	.90
Camouflage Green	125	52	.85
Flat Black	80	27	.88
Flat White	80	27	.91
Gray-Green	70	21	.95
Green	200	93	.95
Lamp Black	209	98	.96
Red	200	93	.95
White	200	93	.94
Quartz, Rough, Fused	70	21	.93
Glass, 1.98 mm	540	282	.90
Glass, 1.98 mm	1540	838	.41
Glass, 6.88 mm	540	282	.93
Glass, 6.88 mm	1540	838	.47
Opaque	570	299	.92
Opaque	1540	838	.68
Red Lead	212	100	.93
Rubber, Hard	74	23	.94
Rubber, Soft, Gray	76	24	.86
Sand	68	20	.76
Sandstone	100	38	.67
Sandstone, Red	100	38	.60-.83
Sawdust	68	20	.75
Shale	68	20	.69
Silica, Glazed	1832	1000	.85
Silica, Unglazed	2012	1100	.75
Silicon Carbide	300-1200	149-649	.83-.96
Silk Cloth	68	20	.78
Slate	100	38	.67-.80
Snow, Fine Particles	20	-7	.82
Snow, Granular	18	-8	.89
Soil			
Surface	100	38	.38
Black Loam	68	20	.66
Plowed Field	68	20	.38
Soot			
Acetylene	75	24	.97
Camphor	75	24	.94
Candle	250	121	.95
Coal	68	20	.95
Stonework	100	38	.67
Water	100	38	.67
Waterglass	68	20	.96

Material	Temperature (F)	(C)	E-Emissivity
Wood	low	low	.80-.90
Beech Planed	158	70	.94
Oak, Planed	100	38	.91