Electronic Temperature Instruments Ltd
EMISSIVITY TABLE

The accuracy of the following figures is almost impossible to guarantee as the emissivity of a surface will not only alter with regard to texture and colour but also with its actual temperature at the time of measurement. We would recommend, in the first instance, comparing measurements found, with an accurate surface probe or wire probe, and then the Infrared thermometer can be adjusted to match the correct emissivity and used for subsequent measurements.

No responsibility can be assumed by ETI Ltd for the accuracy or otherwise of the following figures.

Material	Emissivity
Aluminium: anodised	0.77
Aluminium: polished	0.05
Asbestos: board	0.96
Asbestos: fabric	0.78
Asbestos: paper	0.93
Asbestos: slate	0.96
Brass: highly polished	0.03
Brass: oxidized	0.61
Brick: common	.81-.86
Brick: common, red	0.90
Brick: facing, red	0.92
Brick: fireclay	0.75
Brick: masonry	0.94
Brick: red	0.90
Carbon: candle soot	0.95
Carbon: graphite, filed surface	0.98
Carbon: purified	0.80
Cement	0.54
Charcoal: powder	0.96
Chipboard: untreated	0.90

Chromium: polished	0.10
Clay: fired	0.91
Concrete	0.92
Concrete: dry	0.95
Concrete: rough	.92-.97
Copper: polished	0.05
Copper: oxidized	0.65
Enamel: lacquer	0.90
Fabric: Hessian, green	0.88
Fabric: Hessian, uncoloured	0.87
Fibreglass	0.75
Fibre board: porous, untreated	0.85
Fibre board: hard, untreated	0.85
Filler: white	0.88
Firebrick	0.68
Formica	0.94
Galvanized Pipe	0.46
Glass	0.92
Glass: chemical ware (partly transparent)	0.97
Glass: frosted	0.96
Glass: frosted	0.70
Glass: polished plate	0.94
Gold: polished	0.025
Gold: non polished	0.47
Granite: natural surface	0.96
Graphite: powder	0.97
Gravel	0.28

Gypsum	0.8-0.9
Hardwood: across grain	0.82
Hardwood: along grain	.68-.73
Ice	0.97
Iron: heavily rusted	.91-.96
Lacquer: bakelite	0.93
Lacquer: dull black	0.97
Lampblack	0.96
Limestone: natural surface	0.96
Mortar	0.87
Mortar: dry	0.94
P.V.C.	.91-.93
Paint: 3M, black velvet coating 9560 series optical black	@1.00
Paint: aluminium	0.45
Paint, oil: average of 16 colours	0.94
Paint: oil, black, flat	0.94
Paint: oil, black, gloss	0.92
Paint: oil, grey, flat	0.97
Paint: oil, grey, gloss	0.94
Paint: oil, various colours	0.94
Paint: plastic, black	0.95
Paint: plastic, white	0.84
Paper: black	0.90
Paper: black, dull	0.94
Paper: black, shiny	0.90
Paper: cardboard box	0.81
Paper: green	0.85

Paper: red	0.76
Paper: white	0.68
Paper: white bond	0.93
Paper: yellow	0.72
Paper: tar	0.92
Pipes: glazed	0.83
Plaster	.86-.90
Plaster: rough coat	0.91
Plasterboard: untreated	0.90
Plastic: acrylic, clear	0.94
Plastic: black	0.95
Plastic: white	0.84
Plastic paper: red	0.94
Plastic paper: white	0.84
Plexiglass: Perpex	0.86
Plywood	.83-.98
Plywood: commercial, smooth finish, dry	0.82
Plywood: untreated	0.83
Polypropylene	0.97
Porcelain: glazed	0.92
Quartz	0.93
Redwood: wrought, untreated	0.83
Redwood: unwrought, untreated	0.84
Rubber	0.95
Rubber: stopper, black	0.97
Sand	0.90
Skin, human	0.98

Snow	0.80
Soil: dry	0.92
Soil: frozen	0.93
Soil: saturated with water	0.95
Stainless Steel	0.59
Stainless Plate	0.34
Steel: galvanized	0.28
Steel: rolled freshly	0.24
Styrofoam: insulation	0.60
Tape: electrical, insulating, black	0.97
Tape: masking	0.92
Tile: floor, asbestos	0.94
Tile: glazed	0.94
Tin: burnished	0.05
Tin: commercial tin-plated sheet iron	0.06
Varnish: flat	0.93
Wallpaper: slight pattern, light grey	0.85
Water	0.95
Water: distilled	0.95
Water: ice, smooth	0.96
Water: frost crystals	0.98
Water: snow	0.85
Wood: planed	0.90
Wood: panelling, light finish	0.87
Wood: spruce, polished, dray	0.86