

Appendix F

Common Conversion Factors

Permutations of SI Units

- 1 gC = 1 gram carbon (C)
- 1 GgC = gigagram carbon (C) = 1,000 metric tons carbon (C)
- 1 TgC = 1 teragram carbon (C) = 1 million metric tons carbon (C)
- 1 PgC = 1 petagram carbon (C) = 1 billion metric tons carbon (C)
- 1 ppmv = 1 part per million by volume in the atmosphere
- 1 ppbv = 1 part per billion by volume in the atmosphere
- 1 pptv = 1 part per trillion by volume in the atmosphere

Density

- 1 thousand cubic feet of methane = 42.28 pounds
- 1 thousand cubic feet carbon dioxide = 115.97 pounds
- 1 metric ton natural gas liquids = 11.6 barrels
- 1 metric ton unfinished oils = 7.46 barrels
- 1 metric ton alcohol = 7.94 barrels
- 1 metric ton liquefied petroleum gas = 11.6 barrels
- 1 metric ton aviation gasoline = 8.9 barrels
- 1 metric ton naphtha jet fuel = 8.27 barrels
- 1 metric ton kerosene jet fuel = 7.93 barrels
- 1 metric ton motor gasoline = 8.53 barrels
- 1 metric ton kerosene = 7.73 barrels
- 1 metric ton naphtha = 8.22 barrels
- 1 metric ton distillate = 7.46 barrels
- 1 metric ton residual oil = 6.66 barrels
- 1 metric ton lubricants = 7.06 barrels
- 1 metric ton bitumen = 6.06 barrels
- 1 metric ton waxes = 7.87 barrels
- 1 metric ton petroleum coke = 5.51 barrels
- 1 metric ton petrochemical feedstocks = 7.46 barrels
- 1 metric ton special naphtha = 8.53 barrels
- 1 metric ton miscellaneous products = 8.00 barrels

Alternative Measures of Greenhouse Gases

- 1 pound methane, measured in carbon units (CH₄-C) = 1.333 pounds methane, measured at full molecular weight (CH₄)
- 1 pound carbon dioxide, measured in carbon units (CO₂-C) = 3.6667 pounds carbon dioxide, measured at full molecular weight (CO₂)
- 1 pound carbon monoxide, measured in carbon units (CO-C) = 2.333 pounds carbon monoxide, measured at full molecular weight (CO)
- 1 pound nitrous oxide, measured in nitrogen units (N₂O-N) = 1.571 pounds nitrous oxide, measured at full molecular weight (N₂O)

Weight

1 kilogram = 2.205 pounds
1 short ton = 0.9072 metric tons
1 metric ton = 1.1023 short tons = 2,204.6 pounds
1 cubic meter = 35.3147 cubic feet
1 cubic centimeter = 3.531×10^{-5} cubic feet

Area

1 acre = 0.40468724 hectare (ha) = 4,047 m²
1 hectare (ha) = 10,000 m² = 2.47 acres
1 kilometer = 0.6214 miles

Energy

1 joule = 947.9×10^{-21} quadrillion Btu
1 exajoule = 10^{18} joules = 0.9479 quadrillion Btu
1 quadrillion Btu = 1.0551 exajoule