

English-To-Metric Conversion Formulas

Includes formulas tailored to geotextile use

AREA

Acres	x 4047	= m ²
Acres	x 0.4047	= Hectare
Square feet	x 0.0929	= m ²
Square inches	x 645	= mm ²
Square miles	x 2.59	= km ²
Square yards	x 0.836	= m ²

ASPHALT RETENTION

Gallons per yard ²	x 4.53	= l/m ²
Fluid ounces per feet ²	x 0.318	= l/m ²

COST

U.S. \$/yard ²	x 1.196	= \$/m ²
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DENSITY

Lbs per ft ³ (pcf)	x 0.0157	= kN/m ³
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FORCE

Kips (1000 lbs)	x 4.45	= kN
Pounds (lbs)	x 4.45	= N

FORCE PER UNIT LENGTH (e.g., geotextile modulus)

Lbs per foot	x 14.6	= N/m
Lbs per inch	x 0.175	= kN/m

HYDRUALIC FLOW RATE

Gallons/minute/ft ²	x 40.7	= l/minute/m ²
Gallons/minute/ft ²	x 0.679	= l/second/m ²
Gallons/minute/ft ²	x 0.0408	= m ³ /minute/m ²

LENGTH, DISTANCE

Inches	x 25.4	= mm
Inches	x 2.54	= cm
Feet	x 0.305	= m
Miles	x 1.61	= km
Mils	x 0.0254	= mm
Mils	x 25.4	= μ (microns or micrometers)
Yards	x 0.914	= m

MASS

Ounces	x 28.4	= grams
Pounds (lbs)	x 0.454	= kg
Pounds (lbs)	x 0.454x10 ⁻³	= metric ton (tonne)
Ton	x 0.907	= metric ton (tonne)

MASS PER UNIT AREA

Ounces (mass) per yard ²	x 33.9	= grams/m ²
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PRESSURE, STRESS AND MODULUS

Lbs per ft ²	x 47.9	= Pa (Pascals)
Lbs per in ²	x 6.89	= kPa (kilopascals)

TEMPERATURE

(° Fahrenheit - 32) x 5/9	= ° Celsius
[(° Fahrenheit - 32) x 5/9] + 273	= ° Kelvin

TRANSMISSIVITY

Gallons/minute/foot	x 0.207x10 ⁻³	= m ² /second
Gallons/minute/foot	x 12.419	= l/minute/m
Yards ² /minute	x 1.548x10 ⁻³	= m ² /second
Feet ² /minute	x 92.894	= l/minute/m

VOLUME

Cubic feet (ft ³)	x 0.0283	= m ³
Cubic feet (ft ³)	x 28.316	= l
Cubic inches (in ³)	x 16.387	= cm ³
Cubic yards (yd ³)	x 0.7646	= m ³
Gallons	x 3.785	= l

METRIC PREFIXES COMMON FOR GEOTEXTILE AND CIVIL ENGINEERING CONSTRUCTION

Prefix	Symbol	Multiples	Examples
kilo	k	1,000	1 km = 1000 meters
centi	c	0.01	100 cm = 1 meter
milli	m	0.001	1000 mm = 1 meter
micro	μ	1x10 ⁻⁶	1,000,000 μ = 1 meter

