

METRIC UNITS/ SI UNITS

- The metric system, using SI units, is required because your readership is international and SI units are used throughout the world.
- Basic units: * meter (length) * kilogram (mass) * second (time) * Ampere (electric current) * degrees Celsius (temperature) * (luminous intensity)
- New units that have been introduced : * Newton (N) = Force * Pascal (Pa) = Pressure
- It is equal to a Newton per square meter and corresponds to the familiar pounds per square inch (psi): 1 psi = 6.89 kilopascal.

➤ The following are some of the common conversion factors for SI SI Unit conversions

Quantity or Test	Value in Trade or Customary Unit	X	Conversion Factor	=	Value in SI Unit	Symbol
Area	square inches		6.45		square centimeters	cm ²
	square feet		0.0929		square meters	m ²
	square yards		0.836		square meters	m ²
	acres		0.405		hectares	ha
Basis Weight* or Substance (500-sheet ream) or Grammage* when expressed in g/m ²	lb (17x22-500)		3.760		grams per square meter	g/m ²
	lb (24x36-500)		1.627		grams per square meter	g/m ²
	lb (25x38-500)		1.480		grams per square meter	g/m ²
	lb (25x40-500)		1.406		grams per square meter	g/m ²
	pounds per 1000 sq ft (Paperboard)		4.882		grams per square meter	g/m ²
Breaking Length	meters		0.001		kilometers	km
Burst Index	g/cm ²		0.0981		kilopascals	KPa.m ² /g
	g/m ²				grams per square meter	g/m ²
Bursting Strength	pounds per square inch		6.89		kilopascals	kPa
Caliper	mils		0.0254		millimeters	mm
Concora Crush	pounds		4.45		newtons	N
Edge Crush	pounds per inch		0.175		kilonewtons per meter	kN/m
Energy	British thermal units (Btu)		1055		joules	J
Flat Crush	pounds per square inch		6.89		kilopascals	kPa
Force	kilograms		9.81		newtons	N
	pounds		4.45		newtons	N
Length	angstroms		0.1		nanometers	nm
	microns		1		micrometers	µm
	mils		0.0254		millimeters	mm
Mass	feet		0.305		meters	m
	tons (2000 lbs.)		0.907		metric tons	t
	pounds		0.454		kilograms	kg
	ounces (avd p)		28.3		grams	g
Mass per Unit Volume	ounces per gallon		7.49		kilograms per cubic meter	kg/m ³
	pounds per cubic foot		1.60		kilograms per cubic meter	kg/m ³
Puncture Resistance	foot pounds		1.36		joules	J
Ring Crush	pounds (for a 6" length)		0.0292		kilonewtons per meter	kN/m
Stiffness (Taber Units)	gram centimeters (Taber Units)		0.0981		millinewton meters	mN•m
	grams		9.81		millinewtons	mN
Tensile Breaking Load	pounds per inch		0.175		kilonewtons per meter	kN/m
	kilograms per 15 millimeters		0.654		kilonewtons per meter	kN/m
Volume, Fluid	ounces (US Fluid)		29.6		milliliters	mL
	gallons		3.79		liters	L
Volume, Solid	cubic inches		16.4		cubic centimeters	Cm ³
	cubic feet		0.0283		cubic meters	m ³
	cubic yards		0.765		cubic meters	m ³

* See TAPPI Technical Information Paper 0800.01 for additional SI Unit conversions

For Information on TAPPI's Style Guide, please visit -
http://www.tappi.org/content/pdf/standards/tip_guidelines_complete.pdf