



Quality. Service. Sustainability.
Packaging for the Next Generation.

Flexible Packaging Conversions

A comprehensive set of ratios used in the flexible packaging industry.

| Thickness Value | Mils | Inches | Microns (µm) | Millimeters (mm) | Gauge (approx) |
|-------------------|---------|------------|--------------|------------------|----------------|
| 1 mil | 1 | 0.001 | 25.4 | 0.0254 | 100 |
| 0.5 mil | 0.5 | 0.0005 | 12.7 | 0.0127 | 50 |
| 10 mils | 10 | 0.01 | 254 | 0.254 | 1,000 |
| 0.001 inch | 1 | 0.001 | 25.4 | 0.0254 | 100 |
| 1 inch | 1,000 | 1 | 25,400 | 25.4 | 100,000 |
| 1 micron (µm) | 0.03937 | 0.00003937 | 1 | 0.001 | 3.937 |
| 1 millimeter (mm) | 39.3701 | 0.0393701 | 1,000 | 1 | 39,370 |
| 1 gauge (approx) | 0.01 | 0.00001 | 0.254 | 0.000254 | 1 |
| 25.4 microns (µm) | 1 | 0.001 | 25.4 | 0.0254 | 100 |
| 0.0254 mm | 1 | 0.001 | 25.4 | 0.0254 | 100 |

| Area | Square Inches (in ²) | Square Feet (ft ²) | Square Yards (yd ²) | Square Centimeters (cm ²) | Square Meters (m ²) |
|--|----------------------------------|--------------------------------|---------------------------------|---------------------------------------|---------------------------------|
| 1 square inch | 1 | 0.00694444 | 0.000771605 | 6.4516 | 0.00064516 |
| 1 square foot | 144 | 1 | 0.111111 | 929.0304 | 0.092903 |
| 1 square yard | 1,296 | 9 | 1 | 8,361.27 | 0.836127 |
| 1 square centimeter (cm ²) | 0.155 | 0.00107639 | 0.0001196 | 1 | 0.0001 |
| 1 square meter (m ²) | 1,550 | 10.7639 | 1.19599 | 10,000 | 1 |

| Weight | Pounds (lb) | Kilograms (kg) | Ounces (oz) | Grams (g) |
|-----------------|-------------|----------------|-------------|-----------|
| 1 pound (lb) | 1 | 0.453592 | 16 | 453.592 |
| 1 kilogram (kg) | 2.20462 | 1 | 35.274 | 1,000 |
| 1 ounce (oz) | 0.0625 | 0.0283495 | 1 | 28.3495 |
| 1 gram (g) | 0.00220462 | 0.001 | 0.035274 | |

| Speed | fpm | m/min | ips | ipm |
|----------------------------|-----------|--------|-----------|---------|
| 1 foot per minute (fpm) | 1 | 0.3048 | 0.2 | 12 |
| 1 meter per minute (m/min) | 3.28084 | 1 | 0.656168 | 39.3701 |
| 1 inch per second (ips) | 5 | 1.524 | 1 | 60 |
| 1 inch per minute (ipm) | 0.0833333 | 0.0254 | 0.0166667 | 1 |

| Basis Weight | GSM | Basis Weight | GSM |
|--------------|------------------------|--------------|-------------------------|
| 10 lb/ream | 16.28 g/m ² | 45 lb/ream | 73.26 g/m ² |
| 15 lb/ream | 24.42 g/m ² | 50 lb/ream | 81.40 g/m ² |
| 20 lb/ream | 32.56 g/m ² | 55 lb/ream | 89.54 g/m ² |
| 25 lb/ream | 40.70 g/m ² | 60 lb/ream | 97.68 g/m ² |
| 30 lb/ream | 48.84 g/m ² | 65 lb/ream | 105.82 g/m ² |
| 35 lb/ream | 56.98 g/m ² | 70 lb/ream | 113.96 g/m ² |
| 40 lb/ream | 65.12 g/m ² | 75 lb/ream | 122.10 g/m ² |