



International Paper Comparison Tables

| Metric weight | American basis wt. | Text Paper (coated) | Caliper (inches) | Bulk in PPI (pages / inch) | Opacity % | Brightness % |
|---------------|--------------------|-------------------------|------------------|----------------------------|-----------|--------------|
| 80gsm | 55# | Japanese White A Gloss | .0026 | 769 | 91 | 89 |
| | | Japanese White A Matte | .0032 | 625 | 90 | 90 |
| | | Chinese GoldEast Gloss | .0026 | 769 | 91 | 88 |
| | | Chinese GoldEast Matte | .0028 | 714 | 90 | 90 |
| 90gsm | 60# | Finnish Lumi Gloss | .0029 | 690 | 91 | 99 |
| | | Finnish Lumi Silk | .0032 | 625 | 92 | 99 |
| | | Sterling Ultra Gloss | .0028 | 714 | 92 | 90 |
| | | Sterling Ultra Matte | .0034 | 588 | 94 | 90 |
| | | Korean Pacesetter Gloss | .0028 | 714 | 93 | 91 |
| | | Korean Pacesetter Matte | .0032 | 625 | 94 | 91 |
| 95gsm | 65# | Japanese White A Gloss | .0031 | 645 | 94 | 90 |
| | | Japanese White A Matte | .0038 | 526 | 93 | 90 |
| | | Chinese GoldEast Gloss | .0030 | 667 | 93 | 88 |
| | | Chinese GoldEast Matte | .0034 | 588 | 92 | 90 |
| 100gsm | 67# | Finnish Lumi Gloss | .0032 | 625 | 93 | 99 |
| | | Finnish Lumi Silk | .0035 | 571 | 94 | 99 |
| 105gsm | 70# | Korean Pacesetter Gloss | .0033 | 606 | 94 | 91 |
| | | Korean Pacesetter Matte | .0038 | 526 | 95 | 91 |
| | | Chinese GoldEast Gloss | .0034 | 588 | 94 | 89 |
| | | Chinese GoldEast Matte | .0039 | 513 | 94 | 91 |
| | | Sterling Ultra Gloss | .0033 | 606 | 94 | 90 |
| | | Sterling Ultra Matte | .0039 | 513 | 95 | 90 |
| | | Japanese White A Gloss | .0034 | 588 | 95 | 90 |
| | | Japanese White A Matte | .0044 | 455 | 94 | 90 |
| 115gsm | 77# | Finnish Lumi Gloss | .0035 | 571 | 94 | 99 |
| | | Finnish Lumi Silk | .0038 | 526 | 95 | 99 |
| | | Chinese GoldEast Gloss | .0038 | 526 | 96 | 89 |
| | | Chinese GoldEast Matte | .0044 | 455 | 95 | 91 |
| | | Japanese White A Gloss | .0037 | 541 | 96 | 90 |
| | | Japanese White A Matte | .0047 | 426 | 94 | 90 |
| 120gsm | 80# | Korean Pacesetter Gloss | .0038 | 526 | 95 | 91 |
| | | Korean Pacesetter Matte | .0042 | 476 | 95 | 91 |
| | | Sterling Ultra Gloss | .0037 | 541 | 95 | 90 |
| | | Sterling Ultra Matte | .0046 | 435 | 96 | 90 |
| 128gsm | 85# | Japanese White A Gloss | .0042 | 476 | 98 | 90 |
| | | Japanese White A Matte | .0054 | 370 | 94 | 90 |
| | | Chinese GoldEast Gloss | .0042 | 476 | 97 | 89 |
| | | Chinese GoldEast Matte | .0048 | 417 | 96 | 91 |
| 130gsm | 87# | Finnish Lumi Gloss | .0038 | 526 | 94 | 99 |
| | | Finnish Lumi Silk | .0042 | 476 | 95 | 99 |
| 140gsm | 95# | Chinese GoldEast Gloss | .0045 | 444 | 97 | 89 |
| | | Chinese GoldEast Matte | .0054 | 370 | 96 | 91 |
| | | Japanese White A Gloss | .0045 | 444 | 97 | 90 |
| | | Japanese White A Matte | .0061 | 328 | 98 | 90 |
| 150gsm | 100# | Finnish Lumi Gloss | .0047 | 426 | 96 | 99 |
| | | Finnish Lumi Silk | .0049 | 408 | 97 | 99 |
| | | Sterling Ultra Gloss | .0047 | 426 | 97 | 90 |
| | | Sterling Ultra Matte | .0061 | 328 | 98 | 90 |
| | | Korean Pacesetter Gloss | .0047 | 426 | 98 | 91 |
| | | Korean Pacesetter Matte | .0056 | 357 | 98 | 91 |
| 157gsm | 105# | Chinese GoldEast Gloss | .0050 | 400 | 98 | 89 |
| | | Chinese GoldEast Matte | .0062 | 323 | 98 | 91 |
| | | Japanese White A Gloss | .0050 | 400 | 98 | 90 |
| | | Japanese White A Matte | .0070 | 285 | 99 | 90 |
| 170gsm | 115# | Finnish Lumi Gloss | .0050 | 400 | 96 | 99 |
| | | Finnish Lumi Silk | .0058 | 345 | 97 | 99 |
| | | Sterling Ultra Matte | .0074 | 270 | 98 | 90 |
| 200gsm | 135# | Finnish Lumi Gloss | .0060 | 333 | 97 | 99 |
| | | Finnish Lumi Silk | .0070 | 286 | 98 | 99 |

Spine Width Calculator

Spine Width = Book Block Thickness + Case Thickness

- To find book block thickness, you must know:**
 - Number of pages in the book (not including endsheets)
 - Type of paper used in text (weight & country of origin)
 - Bulk of paper in PPI (refer to Paper Equivalency Table)
 - Round back or square back (with board in spine)
- Book block thickness – number of pages divided by PPI**
 - Example: 240pp book using 128gsm Korean matte
 - 240pp divided by 416 PPI = .58" thick
 - Note: Round up decimals to nearest 1/32" (.58" = 19/32")
- Case thickness = (2.5 x board thickness in inches)**
 - Example: 100pt. boards over imitation cloth + endsheets
 - (2.5 x .100") = .25" thick (.25" = 1/4")
 - Note: Formula allows for case material + endsheets + expansion
- Spine width = book block thickness + case thickness**
 - Example: .58" book block + .25" case = .83" spine width
 - Spine width = .83" = 27/32" = 21mm
 - Note: If book has a round back, add 10% to spine width

Woodfree (Uncoated Offset) Paper

| Metric weight | American basis weight | Text paper | Caliper (inches) | Bulk in PPI (pages per inch) |
|---------------|-----------------------|--------------|------------------|------------------------------|
| 80gsm | 54# | Thailand AA | .004 | 500 |
| | | Japanese NPI | .0038 | 526 |
| 100gsm | 67# | Thailand AA | .005 | 400 |
| | | Japanese NPI | .0042 | 476 |
| 120gsm | 80# | Thailand AA | .006 | 333 |
| | | Japanese NPI | .0050 | 400 |
| 140gsm | 95# | Thailand AA | .007 | 286 |
| | | Japanese NPI | .0062 | 323 |
| 180gsm | 120# | Thailand AA | .009 | 222 |
| | | Japanese NPI | .0085 | 308 |

Recommendations:

For maximum bulk, use Thai AA.
For printability and smoothness, use Japanese NPI.

CASEBOARD (Hardcover)

| Metric | USA | Asia | Europe |
|--------|--------------|------|---------|
| 2.0mm | .080 (80pt) | 24oz | 1240gsm |
| 2.5mm | .100 (100pt) | 32oz | 1640gsm |
| 3.0mm | .120 (120pt) | 40oz | 2040gsm |
| 3.5mm | .140 (140pt) | 48oz | 2450gsm |
| 4.0mm | .160 (160pt) | 56oz | 2800gsm |

Four Colour Print Group

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SOFTCOVER (C2S Artboard)

| US basis cover weight | Metric weight | Caliper (inches) | Pt. Size (Bulk) |
|-----------------------|---------------|------------------|-----------------|
| 80# | 190gsm | .008 | 8pt. |
| 90# | 210gsm | .009 | 9pt. |
| 100# | 230gsm | .010 | 10pt. |
| | 260gsm | .012 | 12pt. |
| | 310gsm | .014 | 14pt. |
| | 370gsm | .016 | 16pt. |
| | 420gsm | .019 | 19pt. |

Inches & Millimeters Conversion Chart

| Fractional Inches | Decimal Inches | mm |
|-------------------|----------------|---------|
| 1/64 | .02" | 0.4 mm |
| 1/32 | .03" | 0.8 mm |
| 1/16 | .06" | 1.6 mm |
| 3/32 | .09" | 2.4 mm |
| 1/8 | .12" | 3.2 mm |
| 5/32 | .16" | 4.0 mm |
| 3/16 | .19" | 4.8 mm |
| 7/32 | .22" | 5.5 mm |
| 1/4 | .25" | 6.3 mm |
| 9/32 | .28" | 7.1 mm |
| 5/16 | .31" | 7.9 mm |
| 11/32 | .34" | 8.7 mm |
| 3/8 | .37" | 9.5 mm |
| 13/32 | .41" | 10.3 mm |
| 7/16 | .44" | 11.1 mm |
| 15/32 | .47" | 11.9 mm |
| 1/2 | .50" | 12.7 mm |
| 17/32 | .53" | 13.5 mm |
| 9/16 | .56" | 14.3 mm |
| 19/32 | .59" | 15.1 mm |
| 5/8 | .62" | 15.9 mm |
| 21/32 | .66" | 16.7 mm |
| 11/16 | .69" | 17.5 mm |
| 23/32 | .72" | 18.3 mm |
| 3/4 | .75" | 19.0 mm |
| 25/32 | .78" | 19.8 mm |
| 13/16 | .81" | 20.6 mm |
| 27/32 | .84" | 21.4 mm |
| 7/8 | .87" | 22.2 mm |
| 29/32 | .90" | 23.0 mm |
| 15/16 | .93" | 23.8 mm |
| 31/32 | .96" | 24.6 mm |
| 1 inch | 1.0" | 25.4 mm |

How To Convert Text Paper (lbs.) to Grams:

Formula:

Lbs. x 1.5 = gsm
(When you know lbs., multiply by 1.5 to find grammage.)

$$1.5 \times \text{___ lbs.} = \text{___ gsm}$$

$$.67 \times \text{___ gsm} = \text{___ lbs.}$$

(i.e.: 80lbs. x 1.5 = 120gsm)

Minimum Recommended Caseboard Thickness

80pt. board = 32pp kids' books

100pt. board = 8.5x11" or smaller

120pt. board = 9x12", 10x10"

140pt. board = oversized books