A Guide to Calculating USPS Mailing & Distribution Costs

Domtar

Print and direct mail will always be an important tool to the marketing mix, so it's important to understand your options when budgets are tight. In this download, you will learn how changing basis weights or types of papers can help positively impact your bottom line, potentially reducing mailing and distribution costs.

Step 1: Identify the type of paper you are going to be using.

Paper Type	Basic Sizes
Bond & Writing	17 x 22
Text	25 x 38
Cover	20 x 26
Vellum Bristol	22.5 x 28.5
Index	25.5 x 30.5
Tag	24 x 36

Step 2: Figure out the M Weight.

Once you've figured out which type of paper you are going to use, you need to figure out the M weight. The M weight information is listed in a swatchbook. Using Cougar Smooth as an example:

Category	Basic Sheet Size	Actual Sheet Size	Paper Weight	Weight of 1,000 Sheets
Text	25 x 38	25 x 38	80 lb.	160M
Cover	20 x 26	23 x 35	80 lb.	248M

- 500 sheets of Cougar Smooth 25 x 38 Text weighs 80 lb., so 1,000 sheets would weigh 160 lb. or 160M.
- 500 sheets of Cougar Smooth 20 x 26 Cover weighs 80 lb., so 1,000 sheets would weigh 248 lb. or 248M.

Step 3: Figure out weight per square inch.

Once you've figure out the M weight, you then need to figure out weight per square inch. This is the mathematical weight of your proposed printed piece. Understanding this weight will help you calculate how changing the basis weight may help on postage and distribution costs. This will also help you understand the impact of changing the size of a printed piece.

Example: 80 lb. Text

- A single sheet of 25 x 38 = 950 square inches (25 times (x) 38 = 950)
- 500 sheets of 25 x 38 = 475,000 square inches (950 times (x) 500 = 475,000)
- 80 pounds = 1,280 ounces (80 times (x) 16 ounces {in a pound}) = 1,280 ounces

Weight per square inch = weight in ounces divided by size in square inches

- 1,280 ounces divided by (÷) 475,000 sq. in. = 0.0026947 ounces/in^2

Square inch factor of 80 lb. Text is 0.0026947 ounces/in^2

To make things easier, we've figured out the square inches of the most popular paper weights.

Text (25 x 38)	Square Inch Factor
30 lb.	0.0010105
35 lb.	0.0011789
40 lb.	0.0013474
45 lb.	0.0015158
50 lb.	0.0016842
55 lb.	0.0018526
60 lb.	0.0020211
70 lb.	0.0023579
80 lb.	0.0026947
90 lb.	0.0030316
100 lb.	0.0033684
110 lb.	0.0037053
120 lb.	0.0040421
Cover (20 x 26)	**Square Inch Factor**
50 lb.	0.0030769
60 lb.	0.0036923
65 lb.	0.004
80 lb.	0.0049231
100 lb.	0.0061538
120 lb.	0.0073846

Bond (17 x 22)	Square Inch Factor
16 lb.	0.001369
20 lb.	0.0017112
24 lb.	0.0020535
28 lb.	0.0023957
32 lb.	0.002738
36 lb.	0.0030802
Index (25.5 x 30.5)	**Square Inch Factor**
110 lb.	0.0452733
135 lb.	0.0555627
170 lb.	0.0699678
Vellum Bristol (22.5 x 28.5)	**Square Inch Factor**
67 lb.	0.0033435
80 lb.	0.0039922
100 lb.	0.049903
Tag (24 x 36)	**Square Inch Factor**
100 lb.	0.0037037
125 lb.	0.0046296
150 lb.	0.0055556

Step 4: Figure out mailing weight of piece.

We will now figure out the mailing weight using an 8.5 x 11, 16-page signature using 80 lb. Text.

PROCESS

A. Determine the number of square inches of paper in the signature:

8.5 x 11 = 93.5 sq. in.

8 leafs of paper in the 16-page signature

8 x 93.5 = 748 sq. in. of paper in the signature

B. The weight of one (1) square inch of 80 lb. Text paper is 0.0026947 ounces

C. The weight of the signature:

748 sq. in. times (x) the weight of one (1) sq. in. 0.0026947 = 2.0156 ounces

Mailing Weight Implications Examples:

Cover example – 8.5 x 11, 4-page Cover

8.5 x 11 = 93.5 sq. in. | 2 leafs of 8.5 x 11 or 2 x 93.5 = 187 sq. in.

Basis Weight	Stock	Square Inches	Square Inch Factor	Weight
120 lb.	Cover	187	0.0073846	1.3809 oz.
100 lb.	Cover	187	0.0061538	1.1507 oz.
80 lb.	Cover	187	0.0049231	0.9206 oz.

IMPLICATIONS OF FIRST CLASS MAILING - NON PRE-SORT (July 2024 rates)

First ounce: $0.73 | Additional ounce: $0.28

100 lb. Cover = 1.1507 oz. = $1.01 ($0.73 + $0.28) | 80 lb. Cover = .920 oz. = $0.73

In this example, changing your basis weight from 100 lb. Cover to 80 lb. Cover would result in a cost savings of $0.28 per piece.

Text example – 8.5 x 11, 16-page signature

8.5 x 11 = 93.6 sq. in. | 8 leafs in a 16-page signature = 748 sq. in.

Basis Weight	Stock	Square Inches	Square Inch Factor	Weight
80 lb.	Text	748	0.0026947	2.0156 oz.
70 lb.	Text	748	0.0023579	1.7637 oz.

IMPLICATIONS OF FIRST CLASS MAILING (Oct. 2023 rates)

First ounce: $0.73 | Additional ounce: $0.28

80 lb. Text = 2.0156 oz. = $1.29 ($0.73 + $0.28 + $0.28) | 70 lb. Text = 1.7637 = $1.01 ($0.73 + $0.28)

In this example, changing your basis weight from 80 lb. Text to 70 lb. Text would result in a cost savings of $0.28 per piece.

This tool is for informational purposes only. Please work with your print supplier to determine actual mailing costs.

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