athens paper

WALL PRINTING

PAPER TIPS Coated Paper Calipers

Paper is bought and sold in price per M sheets, with a key consideration being the basis weight of the paper. Often over- looked as a **key factor** is the **caliper, or thickness** of specific grades of paper. While caliper is related to the weight of a sheet, with heavier weight paper generally thicker than lighter weight, this is not always the case. Often the **finish** of a coated sheet **will impact its caliper as much as the basis weight.**

With coated papers a **gloss finish provides the smoothest surface**. **Dull coated has** an **uneven surface** to deflect light, while **matte coated grades have a toothy finish** in spite of being coated. Silk grades fall somewhere between a gloss and a dull. As a result gloss papers in the same grade classification are thinner than dull, while dull papers are thinner than matte coated. Put another way**, matte is the thickest**, **followed by dull, then silk and finally gloss**. Frequently an 80lb matte will have the same caliper as a 100lb gloss sheet. Matte papers, in part because of their bulk, also tend to have more opacity than gloss grades at the same basis weight. As a result you could print a book on an 80lb matte and have similar bulk and opacity to what would be expected with a 100lb gloss sheet of the same grade.

Here are some **target caliper comparisons** on Utopia 2 from Appleton. Note where the **80lb matte** has approximately the **same caliper as the 100lb gloss.**

	Gloss	Dull	Matte
80 lb Text	.0037	.0040	.0048
100 lb Text	.0047	.0050	.0061

Another key point is that **higher rated coated papers tend to have less bulk and opacity than do lower rated grades**. This is because the grades with the best gloss and ink hold-out typically have more coating relative to their total weight than do lower rated grades. Since **coating has less bulk and opacity than does wood pulp,** this results in the #1 grade being thinner and less opaque than the lower rated grade. This would also hold true for lower grades, where a # 3 would typically have more bulk than a # 2. Accordingly it is very unusual to utilize # 1 sheets below an 80 lb text weight, and many of the high gloss premium papers are not made below a 90 lb basis weight. No lightweight grades (60lb for sheet fed) are produced as # 1 grades, only as #2 or # 3.

If **caliper** is a **key consideration** when printing on coated papers, take into account the dramatic **difference in bulk between various finishes and grade classifications.** It can make a substantial difference in the perception and feel of the final piece.