



## Paper characteristics

### CALIPER

A paper's thickness, or caliper, is measured by placing it between two adjustable plates at a certain pressure.

**Several data points are averaged** to account for sheet compressibility and irregularities.

Kallima Coated Cover is **sold to caliper**. It is available in calipers ranging from 8 to 16 point.

### BASIS WEIGHT

Basis weight is the weight of a ream of paper, in pounds, cut to the basic size for a specific grade of paper.

It can also be expressed in pounds per 1,000 square feet (lbs/MSF) or grams per square meter (gsm).

### STIFFNESS

Stiffness is a measure of the paper's ability to withstand bending.

It is **proportional to caliper and basis weight**.



## ROUGHNESS

A sheet's texture can also be described in terms of surface roughness.

Commonly used measurements gauge the degree of air leakage between the paper surface and an even measuring head.

## GLOSS

Gloss is the degree to which a surface exhibits a mirror-like reflection of light.

Gloss is easier to notice on calendered, coated or varnished papers, as these finishes have better reflective properties.

## BRIGHTNESS

Brightness is a measurement of reflectance of a specific wavelength of blue light.

## WHITENESS

Like brightness, whiteness is a measurement of light reflectance, but instead of measuring blue light, it measures the light reflected by the paper across the visible spectrum.

**The whiteness formula yields the best correlation** between instrument measurements and the visual assessment of whiteness.

Papers with **optical brightening agents (OBAs)** have higher brightness and whiteness values, as the sheets appear whiter.

## SHADE

Color variations are described as shade.

The  $L^*a^*b^*$  color space represents all perceivable colors mathematically, in 3 dimensions.

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