

**Use information:** This paragraph is informational only and is not exclusively definitive of the end use.

For high quality multicolor offset printing of maps, folded inserts, etc., requiring good folding endurance. Printed matter may include text, line illustrations, and halftones up to 150-line screen.

**Stock:** 100 pct bleached chemical woodpulp. The use of melamine-formaldehyde or any material that releases formaldehyde into the atmosphere at concentration of 0.1 ppm or greater shall not be permitted in the manufacture of this paper.

*Note:*<sup>1</sup> Not less than 20 pct postconsumer fiber. Any percent over 20 percentage points, is encouraged, provided that the requirements of this Standard are met.

**Acidity:** pH value by cold extraction shall be not less than 4.8.

**Grammage (g/m<sup>2</sup>)** ..... 75 83  
Basis weight: 17 by 22 inches, 500 sheets (pounds) ..... 20 22  
A tolerance of ±5 pct shall be allowed.

**Wet tensile strength:** Average not less than—  
Machine direction (kN/m) ..... 0.5 0.7  
Cross direction (kN/m) ..... 0.25 0.35  
Equivalent—  
Machine direction (kg/in) ..... 1.4 1.8  
Cross direction (kg/in) ..... 0.64 0.90

**Folding endurance:** Average, each direction, not less than—  
M.I.T. (double folds) ..... 150 175  
Schopper (double folds) ..... 200 230

**Bursting strength:** Average, not less than—  
Dry (kPa) ..... 200 230  
Wet (kPa) ..... 20 23  
Equivalent—  
Dry (lb/in<sup>2</sup>) ..... 29 33  
Wet (lb/in<sup>2</sup>) ..... 3.0 3.3

**Opacity:** Average, not less than (percent) ..... 90 91  
No individual specimen shall average less than (percent) ..... 88 89

**Thickness:** Average (mm) ..... 0.090 0.095  
Equivalent (inch) ..... 0.0035 0.0037

A tolerance of ±0.013 mm (0.0005 inch) shall be allowed. Paper shall be uniform and shall not vary more than 0.011 mm (0.0004 inch) from one edge to the other.

**Water resistance:** Average, not less than (seconds) ..... 25 30

**Smoothness:** Average, each side (units) ..... 110 to 80 110 to 80

**Writing quality:** Characters written with ball point and felt tip pens shall be clear cut and free from excessive feathering.

**Erasing quality:** Paper shall retain good ruling, writing, and typing quality, texture, and surface appearance, without ink spreading after repeated erasures. After erasures and burnishing, texture shall permit redrawing of sharp lines in ink.

**Blocking:** Sheets shall not stick together after being wet with water and then allowed to dry in contact with other sheets of the same paper.

**General appearance:** Paper shall conform to the standard sample(s) adopted by the Government.

**Color:** The paper in the order (or publication) shall be uniform with a target brightness of 81 pct. The color variation shall not exceed DE(CIELAB)=1.0.

**Formation:** Shall be uniform.

**Cleanliness:** The dirt count for each side of the paper shall not exceed 100 specks per square meter. No sample sheet (600 to 650 cm<sup>2</sup> in size) shall contain more than one defect with an equivalent area of 0.25 mm<sup>2</sup> or greater.

**Sampling and testing:** Shall be conducted in accordance with standards in Part 2, *Government Paper Specification Standards*.

Unless otherwise specified, the following is automatically waived when printing or duplicating is to be accomplished on commercial contract

**Equilibrium relative humidity:** Shall be 45 pct ±5 pct at 23°C ±2°C.<sup>1</sup>

**Sizing:** Paper shall be surface- and internal-sized suitable for satisfactory printing on both sides of the paper on high-speed offset presses equipped with continuous flow or brush dampening systems.

**Color:** Shall match the Government's standard sample for color. A deviation of DE(CIELAB)=3.0 from the color standard is allowed.

For information only, the CIELAB values (Ill D65, 10° observer) of the color standard are

$$L^*=93.5$$

$$a^*=-0.5$$

$$b^*=1.5$$

**Curl:** Paper shall lie flat with either no tendency to curl or with a curl which can be overcome under reasonable working conditions.

**Surface:** Shall be free from lint, fuzz, or any particles which will pick, lift, fluff, or pile on the blanket under normal press conditions.

**Size and trim:** Sheets: Paper shall be furnished in the size(s) ordered and shall be flat, trimmed square on four sides with clean smooth edges, and evenly jogged. A tolerance of ±2 mm (1/16 inch) shall be allowed except for sheets 216 by 356 mm (8½ by 14 inches) or less; then a tolerance of ±1 mm (1/32 inch) shall be allowed. Successive sheets within any package shall not differ from each other by more than 0.5 mm (1/64 inch). Paper with the long dimension 813 mm (32 inches) or less shall be considered square if the variation does not exceed 1 mm (1/32 inch); over 813 mm (32 inches), 2 mm (1/16 inch).

**Grain:** Direction of the grain on flat paper shall be as ordered.

**Mill inspection:** Uniformity of color, thickness, and equilibrium relative humidity; freedom from foreign matter, either loose or attached to the paper; and absence of mechanical defects such as wrinkles, cuts, slime holes, partial sheets, and dogears; are all very important. Manufacturers are required to make such inspections and tests as will assure freedom from defects in these characteristics.

<sup>1</sup>This requirement may be waived when so stated in the procurement document. If waived, the following is applicable:

Pressroom conditions: The bulk of this paper will be used in air-conditioned pressrooms maintained at 24°C ±2°C and 45 pct ±8 pct relative humidity.