

T 511 om-02

SUGGESTED METHOD – 1969
OFFICIAL TEST METHOD – 1983
REVISED – 1988
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Folding endurance of paper (MIT tester)

1. Scope

1.1 This method describes the use of the MIT-type apparatus for the determination of the folding endurance of paper. An exhaust fan arrangement maintains the folding head at room temperature.

1.2 The MIT tester is suitable for papers of any thickness; however, if the outer fibrous layers of paper thicker than about 0.25 mm (0.01 in.) rupture during the first few folds, the test loses its significance.

1.3 The procedure for the Schopper-type apparatus is given in TAPPI T 423 "Folding Endurance of Paper (Schopper-Type Tester)."

2. Significance

2.1 Folding endurance tests have been used to estimate the ability of paper to withstand repeated bending, folding, and creasing.

2.2 Folding endurance has also been useful for measuring the deterioration of paper upon aging.

3. Definitions

3.1 *Folding endurance*, the logarithm (to the base 10) of the number of double folds required to break the paper when a strip of paper 15 mm (0.59 in.) wide is tested under a standard tension of 9.81 N (1 kgf).

3.2 *Double fold*, one complete oscillation of the test piece, during which it is folded first backwards then forwards about the same line.