



Cobb Sizing Test for Liquid Absorption

OVERVIEW:

The test is used for determining liquid absorptiveness or resilience of treated and untreated papers, boards, fabrics and other sheet materials. The test consists of a test apparatus, its 10-kg roller and blotting paper. The roller method is recommended to insure better consistency and reliability that can be obtained by manual blotting or rubbing the specimen.

SIGNIFICANCE : (Why this test ?)

Water absorptiveness of paper board or other materials is a function of various characteristics such as sizing, porosity, etc. The Cobb sizing test can be used to test absorption or resistance to absorption of water, oil and other liquids. On Corrugation : The absorption capacity of corrugating medium has to be controlled in order that it has the proper receptivity to the corrugating adhesive, which is an aqueous suspension of starch, for proper adhesion in the corrugating process. Also a lower Cobb represents superior resistance to humidity changes and hence takes higher time to change to atmospheric moisture.



PRINCIPLE This procedure determines the quantity of water absorbed by a sample of paper or other sheet material in a specified time and under standardized conditions. Other liquids such as ink, beverages, oil and water based solutions may be used instead of water. The standard area is one hundred square centimeters (cm²), into which 100cc of liquid are poured to reach a specific height of 1 cm.

DESCRIPTION Cobb Sizing Tester consists of a hollow metal cylinder or ring (100, 25 or 10 cm² inside area); a rubberized base plate with a clamping device to hold the ring against the sample. A pressure adjusting handle is located on the clamping device to seal off the cylinder when testing uneven materials where an unjacketed seal is difficult to maintain. A critical component of this test is a solid stainless steel roller having a smooth face 20cm wide and weighing 10.0+ 0.5kg. Also required for the test is a 100ml graduated cylinder, a balance with sensitivity of 0.01g or better, blotting paper and a timer / stopwatch.

STANDARD COMPLIANCE TAPPI T-441,
IS 1060 (part I),
BS EN 20535,
AS/NZ 1301.411s,
SCAN P12.

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