

ICS 85.060



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1540-2002

Replacing GB/T 1540-1989

**Paper and board -- Determination of water absorption -- Cobb
method**

纸和纸板吸水性的测定(可勃法)

(English Translation)

Issued on: October 15, 2002

Implemented on: April 1, 2003

Issued by: SAMR; SAC

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Foreword

This standard is a revision of GB/T 1540-1989 "Paper and board - Determination of water absorption - Cobb method".

This standard non-equivalently adopts the international standard ISO 535:1991 "Paper and board - Determination of water absorptiveness - Cobb method".

This standard shall, from the date of implementation, replace GB/T 1540-1989.

In this standard, in addition to adding the flat pressure test method, in order to facilitate grasping of specific test operations, the operation procedures of the two different instruments (flip type and flat pressure type) are also described in a detailed manner.

1 Scope

This standard specifies the method of using the Cobb absorption meter to determine the surface water absorption capacity of the paper and board (Cobb value).

This standard is applicable to the determination of water absorption of sized paper and board surface.

This standard is applicable to the low-sized or porous paper or embossed paper of grammage less than 50 g/m²; it is not applicable to the un-sized paper and board, AND it is not applicable to be used for precision evaluation of the writing properties of paper.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. The versions indicated at the time of publication of this standard are valid. All standards are subjected to revision, AND parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

GB/T 450-2002 Paper and board - Sampling (eqv ISO 186:1994)

GB/T 461.1-2002 Paper and board - Determination of capillary rise (Klemm method) (idt ISO 8787:1989)

GB/T 10739-2002 Paper, board and pulps - Standard atmosphere for conditioning and testing (eqv ISO 187:1990)

8 Results and calculations

Where C - Cobb value, g/m²; m₂ - The mass of the sample as weighed after water absorption, g; m₁ - The mass of the sample as weighed before water absorption, g.

8.2

Respectively CALCULATE the average Cobb value of 5 samples (positive side and negative side), which is used as the test result of the positive and negative sides of this sample; if the positive and negative sides are not distinguished from each other, it shall calculate the average Cobb value of the both sides, which is used as the test result of this sample.

9 Test report

The test report shall include the following items.

- a) This standard number;
- b) Sample number;
- c) The atmospheric conditions of the test;
- d) The water absorption time and water temperature used for the test;
- e) The average, maximum, minimum, standard deviation and variation coefficient of the results obtained through the test;
- f) The number of discarded samples and the corresponding reasons;
- g) The date and place of the test;
- h) Any operation that does not comply with the provisions of this standard.