

INTERNATIONAL
STANDARD

ISO
6342

First edition
1993-08-15

**Micrographics — Aperture cards —
Method of measuring thickness of buildup
area**

iTeh STANDARD PREVIEW

*Micrographie — Cartes à fenêtre — Méthode de mesurage de la zone
de surepaisseur* (standards.iteh.ai)

[ISO 6342:1993](https://standards.iteh.ai/catalog/standards/sist/53255552-bce5-483c-bdaa-f45d6e6d3760/iso-6342-1993)

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Reference number
ISO 6342:1993(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6342 was prepared by Technical Committee ISO/TC 171, *Micrographics and optical memories for document and image recording, storage and use*.

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Annex A of this International Standard is for information only.

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

Aperture cards are widely used in many microfilm systems. As the various kinds differ in the thickness of the buildup area, a method of measuring the buildup thickness is necessary.

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Micrographics — Aperture cards — Method of measuring thickness of buildup area

1 Scope

This International Standard specifies a method of measuring the thickness of the buildup area on aperture cards (camera cards and copy cards) for manufacturing and inspection purposes.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 534:1988, *Paper and board — Determination of thickness and apparent bulk density or apparent sheet density.*

ISO 6196-1:1980, *Micrographics — Vocabulary — Section 01: General terms.*

ISO 6196-4:1987, *Micrographics — Vocabulary — Part 04: Materials and packaging.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 6196-1 and ISO 6196-4 apply.

4 Apparatus

4.1 Dial micrometer, dead-weight type, either motor or manually operated. The motor-operated micrometer is preferred. Lowering speed shall be approximately 0,8 mm/s. The movable face or pressure foot shall be circular with a diameter of 16 mm \pm 0,5 mm. The fixed face or anvil shall be of

a size that allows the whole area of the pressure foot to be in contact with the anvil in the zero position. The pressure foot shall move on an axis perpendicular to the anvil. The pressure foot shall exert a steady pressure on the test sample of 50 kPa \pm 5 kPa, based on the area of the pressure foot.

The micrometer shall be in accordance with ISO 534:1988, table 2, as follows:

Micrometer characteristic	Maximum permitted value
Indication error	2,5 μ m or 0,5 %
Error of parallelism between pressure faces	5 μ m or 1 %
Repeatability of measurement (as a standard deviation)	2,5 μ m or 0,5 %

NOTES

1 The maximum permitted value of a micrometer characteristic is the greater of the two values quoted for it in the table.

2 Where a tolerance is expressed in the form of a percentage, it is based upon the thickness of the test piece under test. Thus, it is possible for a given micrometer to comply with the requirements of the table for some materials, but not for others.

5 Conditioning and testing atmosphere

All test samples shall be conditioned, loosely assembled, for at least 6 h before testing. Samples shall be conditioned and tested at a temperature of 23 $^{\circ}$ C \pm 1 $^{\circ}$ C and a relative humidity of (50 \pm 2) %.

6 Measurement

6.1 General

If a manually-operated micrometer is used, the pressure foot shall either be lowered to within

0,007 5 mm of the surface of the test sample and then released, or be lowered onto the surface at a velocity less than 12 mm/s but not less than 0,8 mm/s specified for the motor-operated micrometer. The pressure foot shall maintain the dead weight loading for at least 2 s. All measurements shall be made on the same card.

6.2 Card thickness

Make at least four measurements at separate places with the pressure foot at least 6,35 mm away from the edges of the card and the buildup area. The greatest of these measurements shall be taken as the thickness of the card.

6.3 Buildup area thickness

Make at least four measurements, one on each side of the buildup area rectangle, as illustrated in figure 1.

The pressure foot shall be centred across the width of the buildup area (see annex A). The greatest of these measurements shall be taken as the thickness of the buildup area.

6.4 Buildup thickness

The buildup thickness of the aperture card shall be taken as the difference between the thickness of the buildup area, as measured in 6.3, and the thickness of the card of the same test sample, as measured in 6.2.

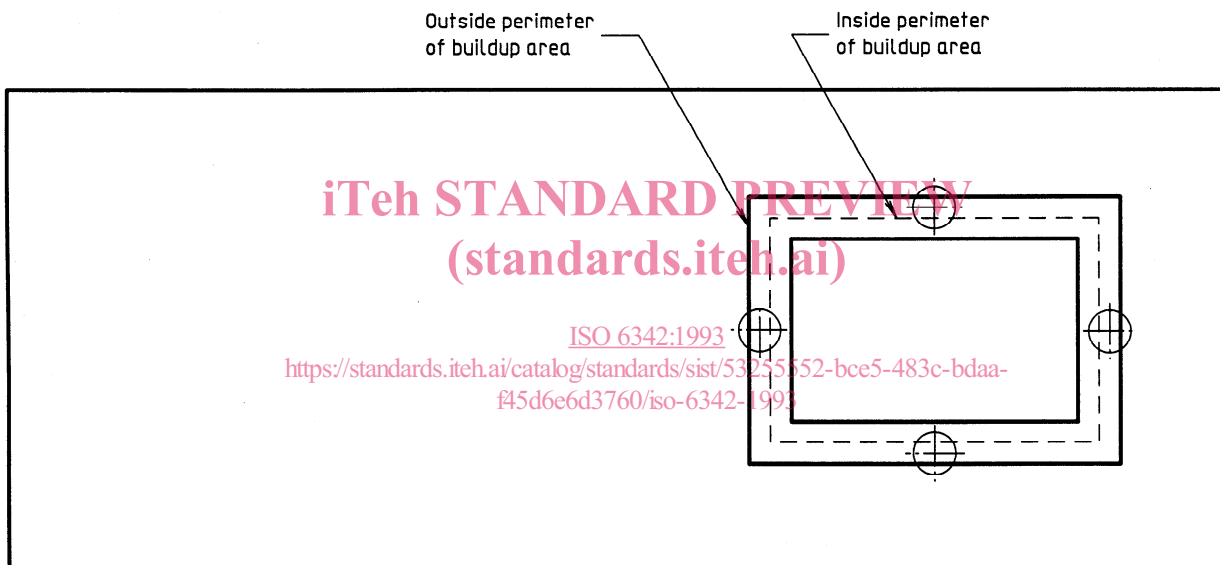


Figure 1 — Pressure foot positions for measuring buildup area thickness

Annex A (informative)

Centring of the pressure foot

Because there are various types of unitized microfilm carrier construction, centring of the pressure foot in accordance with 6.3 may require clarification.

Care should be exercised in placing the pressure foot on the approximate centre of the buildup area. See section A-A in figure A.1.

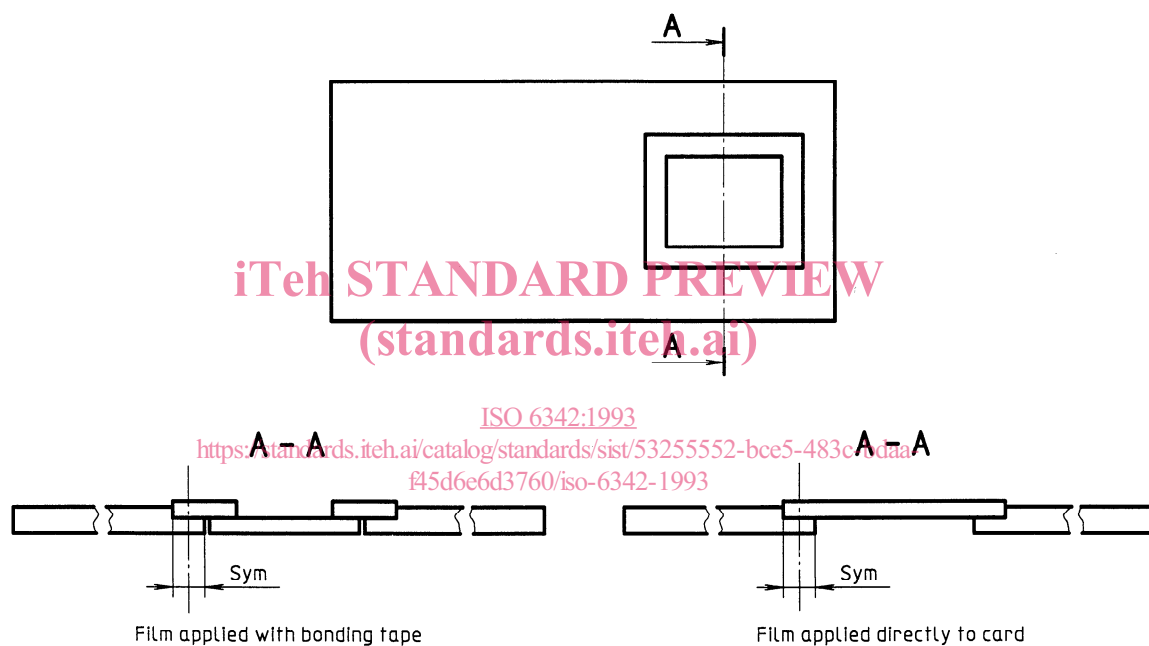


Figure A.1 — Pressure foot centring

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UDC 778.14.068.6:531.717.1

Descriptors: micrographics, aperture cards, tests, thickness measurement.

Price based on 3 pages
