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**Microfilming of technical drawings and  
other drawing office documents —**

**Part 3:  
Aperture card for 35 mm microfilm**

*Microfilmage des dessins techniques et autres documents de bureau  
d'études —*

*Partie 3: Cartes à fenêtre pour microfilms de 35 mm*



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## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this part of ISO 3272 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3272-3 was prepared by Technical Committee ISO/TC 171, *Document imaging applications*, Subcommittee SC 2, *Application issues*.

This second edition cancels and replaces the first edition (ISO 3272-3:1975), which has been technically revised.

ISO 3272 consists of the following parts, under the general title *Microfilming of technical drawings and other drawing office documents*:

- *Part 1: Operating procedures*
- *Part 2: Quality criteria and control of 35 mm silver gelatin microfilms*
- *Part 3: Aperture card for 35 mm microfilm*
- *Part 4: Microfilming of drawings of special and exceptional elongated sizes*
- *Part 5: Test procedures for diazo duplicating of microfilm images in aperture cards*
- *Part 6: Quality criteria and control of systems for enlargements from 35 mm microfilm*

Annex A of this part of ISO 3272 is for information only.

## Introduction

Technical drawings and other drawing office documents may be recorded directly onto microfilm in camera cards or onto microfilm in roll form to be cut and mounted into aperture cards after processing.

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# Microfilming of technical drawings and other drawing office documents —

## Part 3: Aperture card for 35 mm microfilm

### 1 Scope

This part of ISO 3272 specifies the technical characteristics of tab size aperture cards, data processing type, in which the aperture does or does not contain raw microfilm. It covers tape-type and jacket-type aperture cards, including camera cards.

This part of ISO 3272 does not apply to A6 aperture cards.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 3272. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 3272 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1681:1973, *Information processing — Unpunched paper cards — Specification*

ISO 6196-1:1993, *Micrographics — Vocabulary — Part 1: General terms*

ISO 6196-2:1993, *Micrographics — Vocabulary — Part 2: Image positions and methods of recording*

ISO 6196-3:1997, *Micrographics — Vocabulary — Part 3: Film processing*

ISO 6196-4:1998, *Micrographics — Vocabulary — Part 4: Materials and packaging*

ISO 6342:1993, *Micrographics — Aperture cards — Methods of measuring thickness of buildup area*

ISO 6343:1981, *Micrographics — Unitized microfilm carrier (aperture card) — Determination of adhesion of protection sheet to aperture adhesive*

### 3 Terms and definitions

For the purposes of this part of ISO 3272, the terms and definitions given in ISO 6196 (Parts 1 to 4) and the following apply.

#### 3.1

##### face

(of card) side of the card that faces the observer when the image in the microfilm is right reading

**3.2 back**

(of card) side opposite of card

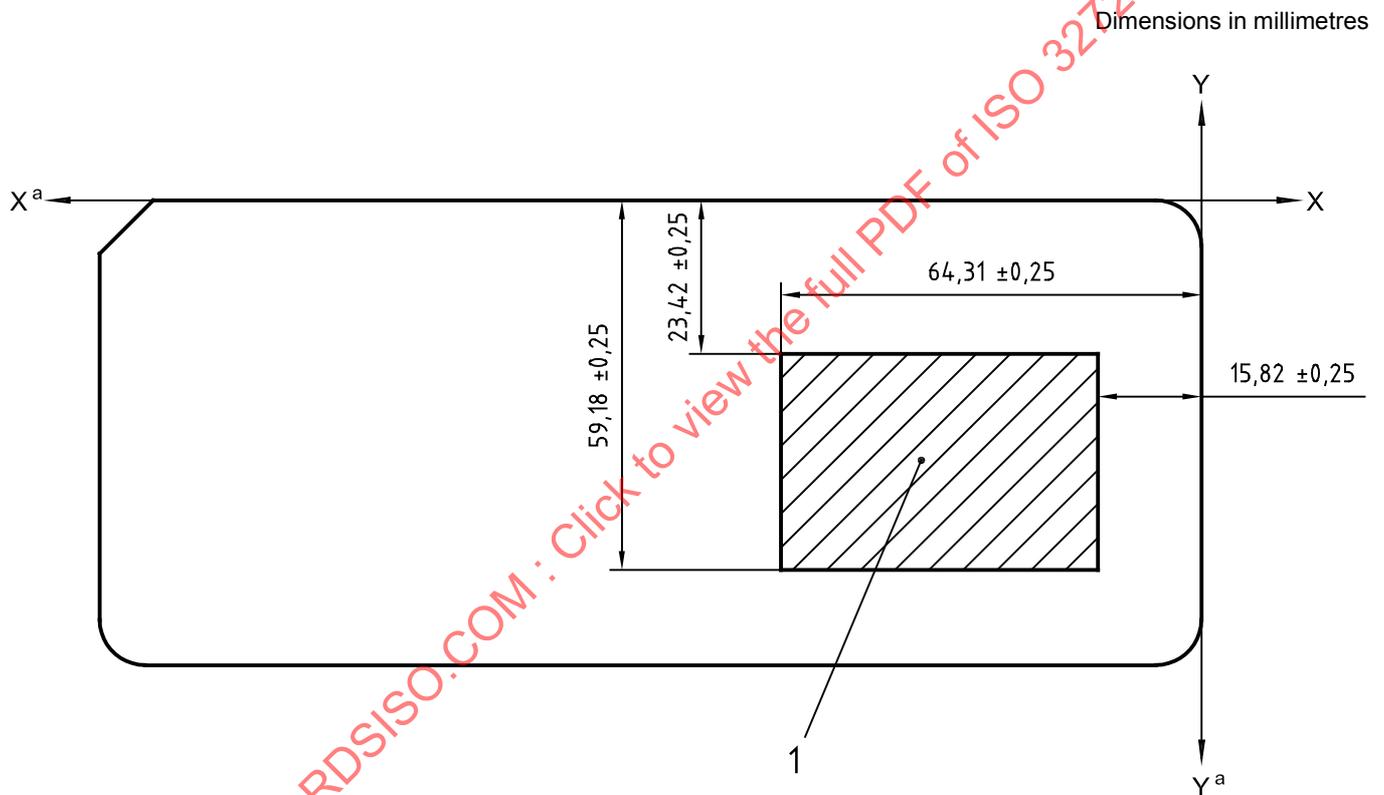
**4 Physical characteristics of the aperture card**

**4.1 Material**

Cards used for making aperture cards shall be unpunched paper cards that conform to ISO 1681. (See annex A.)

**4.2 Aperture characteristics**

The dimensions and location of the aperture in the card shall be as indicated in Figure 1.



**Key**

1 Aperture location

NOTE For squareness of the buildup location to the card, the distance from the datum lines of the inner and outer horizontal and vertical edges of the buildup location shall not vary by more than 0,04 mm.

<sup>a</sup> Datum line.

**Figure 1 — Card location and dimensions of rectangular hole in card**

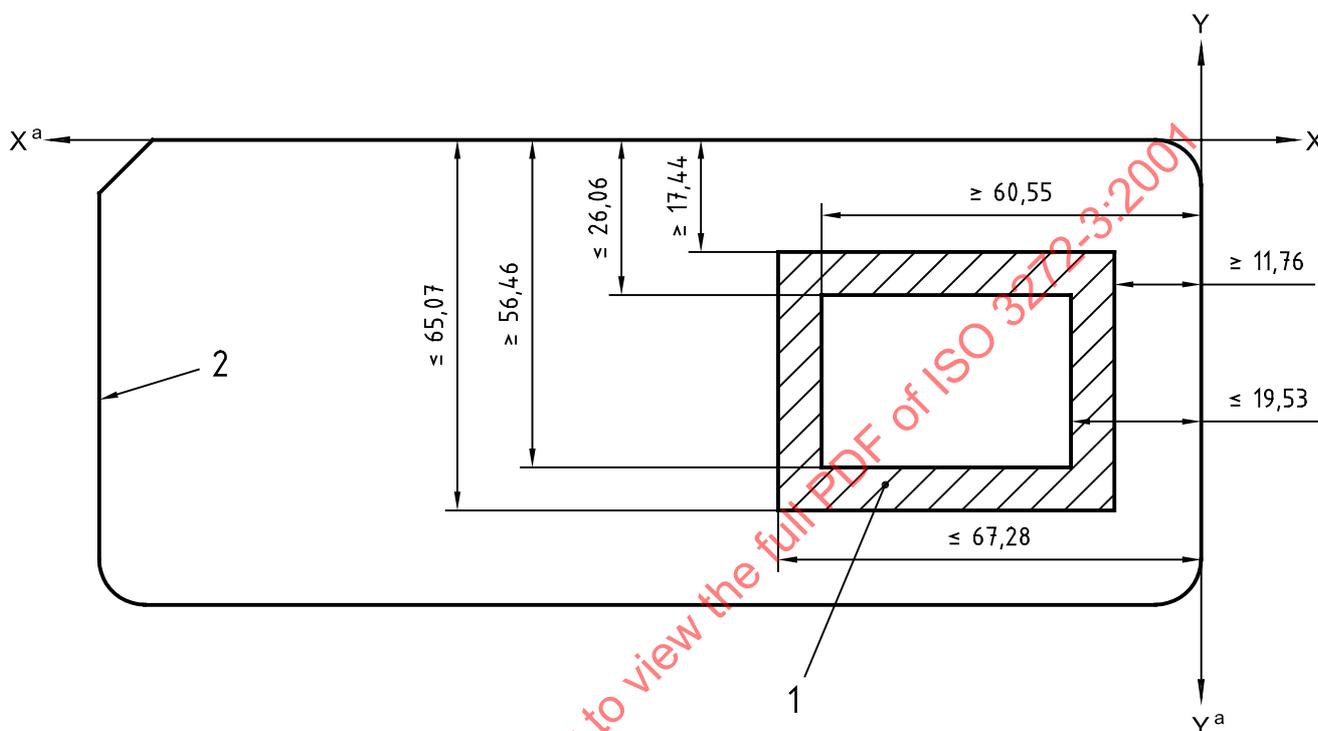
**4.3 Tape-type cards**

This type of aperture card holds the film in place within the aperture by means of a pressure-sensitive adhesive tape which is attached to the film and to one side of the card.

### 4.3.1 Location of adhesive tape

The dimensions and location of the adhesive tape shall be as defined in Figure 2. For tape-face cards, used for odd number generation microfilm, adhesive tape shall be attached to the face of the card; and for tape-back cards, used for even number generation microfilm, the adhesive tape shall be attached to the back of the card.

Dimensions in millimetres



#### Key

- 1 Adhesive tape area
- 2 Overall tabulating card size

<sup>a</sup> Datum line.

**Figure 2 — The location and dimensions of the adhesive tape for tape-type construction**

### 4.3.2 Adhesion of protection sheet to adhesive tape

The adhesive on the tape shall be protected, before the microfilm is mounted, by a translucent sheet of release paper.

Values for the maximum and minimum adhesion of the protection sheet, to facilitate the removal of the protection sheet manually or automatically, shall comply with the requirements of ISO 6343.

**NOTE** As bond strength of the adhesive increases with contact time, so the ease of removal of the protection sheet decreases.

4.3.3 Buildup thickness

The difference between the thickness of the aperture card alone and the total thickness of the card plus the adhesive tape after manufacture is the buildup thickness. The buildup thickness, measured in accordance with ISO 6342, shall not be greater than 5 µm.

4.4 Jacket-type cards

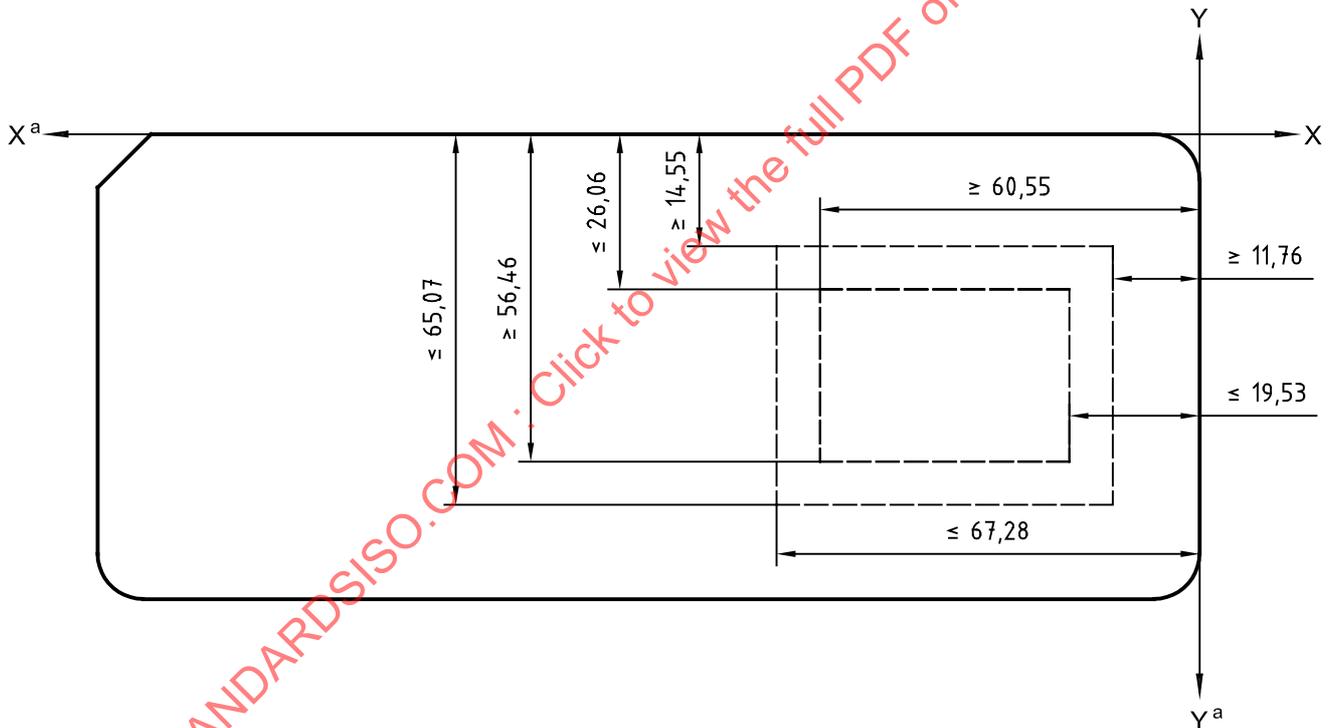
4.4.1 General

This type of aperture card holds the film in place within the aperture by means of two support sheets attached to either side of the card, which form a pocket enclosing the aperture into which the film is placed. The support sheets shall be made of thin, optically clear polyester film.

4.4.2 Location of support sheets

The dimensions and location of the support sheets shall be as indicated in Figure 3.

Dimensions in millimetres



NOTE For squareness of the buildup location to the card, the distance from the datum lines of the inner and outer horizontal and vertical edges of the buildup location shall not vary by more than 0,04 mm.

<sup>a</sup> Datum line.

Figure 3 — Location and dimensions of support sheet for jacket-type construction

## **Annex A** (informative)

### **Aperture cards, corner and colours**

#### **A.1 Corner shape and corner cut**

Cards should have three round corners and one cut corner. It is preferred that, when viewed from the face of the card, the cut is top left, but top right may be used.

#### **A.2 Colour**

It is recommended that different generations of microform be identified by differently coloured or coloured striped cards.

#### **A.3 Colour stripes**

Colour stripes may be of any width and placed on the card in any position. It is normal to use one colour. Most frequently used is a stripe along the top of the card which extends 6,5 mm down from the top edge. The colour stripe should be printed on the card and not produce any significant buildup on the card.

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