

International Standard



2708

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Micrographics — Transparent A6 size microfiche of variable division — Image arrangements A and B

Micrographie — Microfiche transparente de format A6 à partition variable — Dispositions d'images A et B

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2708 was developed by Technical Committee ISO/TC 171, *Micrographics*.

This third edition was submitted directly to the ISO Council, in accordance with clause 5.10.1 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the second edition (i.e. ISO 2708-1976), which had been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Spain
Belgium	Hungary	Switzerland
Bulgaria	India	Thailand
Canada	Israel	Turkey
Czechoslovakia	Italy	United Kingdom
Denmark	New Zealand	USA
Egypt, Arab Rep. of	Poland	USSR
Finland	Romania	Yugoslavia
France	South Africa, Rep. of	

The member bodies of the following countries had expressed disapproval of the document on technical grounds :

Japan
Netherlands

Micrographics — Transparent A6 size microfiche of variable division — Image arrangements A and B

1 Scope and field of application

This International Standard specifies the physical characteristics of a transparent A6 size microfiche, with image arrangements "A" and "B", obtained by division of two alternative image areas into a variable number of image frames adapted to the different sizes and other characteristics of documents for reproduction.

Transparent microfiches of variable division are used for the reproduction of documents of any type and size not exceeding 4 A0, including large size documents such as posters, newspapers and engineering drawings.

These microfiches are intended for international interchange of information and for micropublishing.

Alternative image arrangements, obtained by uniform division of a microfiche, are specified in ISO 2707. ISO 2707 and ISO 2708 do not apply to computer output microfiche.¹⁾

2 References

ISO 216, *Writing paper and certain classes of printed matter — Trimmed sizes — A and B series.*

ISO 446, *Microcopying — ISO No. 1 Mire. — Description and use in photographic documentary reproduction.*

ISO 543, *Cinematography — Motion-picture safety film — Definition, testing and marking.*

ISO 2707, *Microcopying — Transparent A6 size microfiche of uniform division — Image arrangements No. 1 and No. 2.*

ISO 3334, *Microcopying — ISO Test chart No. 2 — Description and use in photographic documentary reproduction.*

3 Principles and application of image arrangements A and B

3.1 Image arrangement A

The first method of dividing the microfiche into image areas, defined in 4.1.2, allows documents of any type, and of any size between sizes 4 A0 and A6, to be produced.

Since documents for reproduction, such as plans, written works and surveys, have sizes mostly similar to the series A sizes of ISO 216, a value very close to that of $\sqrt{2}$ (common to all the ISO sizes) has been adopted for the ratio between the larger and smaller dimension of the microfiche image of all the proposed sizes, or "aspect ratio".

The different image sizes proposed are generally obtained by successive divisions into two equal parts of the total surface of the image available, which corresponds to a single image recorded on each microfiche. This method of division adheres to the above-mentioned value of "aspect ratio".

One of the sizes thus obtained by subdivision is the nearest to the current size of 35 mm microfilm images, which allows contact printing of microfiches using microfilm of this size.

3.2 Image arrangement B

The second method of dividing the microfiche into image areas, also defined in 4.1.2, allows the reproduction of documents of any type from A0 to A6 with the same series of reduction ratios as those used for micrographics engineering drawings and technical office documents. The heading area above the image area is deeper than that with image arrangement A.

1) See ISO 5126, *Micrographics — Computer output microfiche (COM) — Microfiche A6.*

4 Physical characteristics

4.1 Dimensions (see figures 1 and 2)

4.1.1 Overall size

The external dimensions of the microfiche shall be a rectangle of 105 mm × 148 mm.¹⁾

When tolerances are specified for the distribution microfiche they will apply immediately after processing. The measurements shall be made when the film has come to equilibrium at 23 ± 2 °C and 50 ± 5 % relative humidity. Size variations due to raw stock slitting and processing should be considered in determining the tolerances. Additional size changes may occur during ageing, especially for films on cellulose ester supports. (See annex A, clause A.2.) Temporary size changes due to temperature and humidity changes are described in annex A, clause A.3.

4.1.2 Sizes of image areas

The dimensions of the image areas shall be as follows :

Image arrangement A

95 mm × 133 mm

Image arrangement B

82,5 mm × 141 mm

The image areas thus defined do not include the heading area.

4.1.3 Margins

4.1.3.1 Lower margins

The lower margins shall have the following nominal widths :

- image arrangement A : 0,5 mm;
- image arrangement B : 4 mm.

4.1.3.2 Lateral margins

For each of the two image arrangements A and B the lateral margins shall have equal nominal widths.

4.2 Corner rounding

The corners of the microfiche may be rounded, with the excep-

tion of those corners which have been subjected to a corner cut. When corners are rounded, the process shall not remove more than 3 mm of either of the two edges forming the corner.

4.3 Measurements involving cut-off corners

Where segments of an edge have been removed by corner rounding or corner cuts, a straight line extending the remainder of the edge in the relevant direction shall constitute the basis for measuring dimensions and spacing.

4.4 Identification of sensitized side

To facilitate microfiche-to-microfiche copying a notch or a corner cut may be used to identify the sensitized layer of the microfiche, as follows : when a sheet of raw film or a microfiche is held with the long sides in a vertical position and the notch or corner cut is in the upper right-hand corner, the sensitized side shall be towards the observer.

When a notch is used, it shall be made in the shorter side of the sheet, near the appropriate corner. The notch may be of any shape, but it shall not penetrate more than 1,6 mm inward from the edge of the microfiche.

When a corner cut is used, it shall be made in the appropriate corner of the heading area only. The nominal dimensions of the cut are as follows : 6 mm along the longer side of the microfiche and 9 mm along the shorter side.

4.5 Heading area backing

An opaque or semi-opaque backing²⁾ for the heading area is optional. If a heading area backing is used, it shall not increase the thickness of the fiche by more than 0,01 mm.

4.6 Safety film

The film used shall comply with ISO 543.

5 Reduction scale

The reduction scales applicable to the two image arrangements A and B shall have the following nominal values, with a tolerance of $-\frac{0}{4}$ % (these reduction ratios correspond to the standard sizes; in the cases of other sizes, any other reduction ratios between 9 and 30 may be selected) :

- image arrangement A : 1:9 1:12,75 1:18 1:25,5
- image arrangement B : 1:10,6 1:15 1:21,2 1:30

1) ISO 6148, *Photography — Film (silver-gelatin and non-silver gelatin types) for micrographic uses — Dimensions of sheet and roll material* (in preparation) will provide manufacturing tolerances for raw film. Until ISO 6148 is published, the manufacturing tolerances for raw film shall be $105 -\frac{0}{0,25}$ mm × $148 -\frac{0}{0,5}$ mm.

(See annex A for more information.)

2) The use of such backing restricts duplication.