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Micrographics — Microfilming of serials — Operating procedures

*Micrographie — Microfilmage des publications en série — Procédures
opératoires*



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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.

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 11906 was prepared by Technical Committee ISO/TC 171, *Document Imaging Applications*, Subcommittee SC 2, *Application issues*.

Micrographics — Microfilming of serials — Operating procedures

1 Scope

This International Standard establishes general principles for microfilming printed serials for preservation and distribution in libraries and other documentation services. It includes requirements for targets to ensure proper bibliographic control and to verify that the film meets International Standards required for archival microfilming.

This International Standard is applicable only to silver-gelatin microfilms that are 16 mm or 35 mm wide, in rolls or strips, and to A6 microfiche, including first-generation (camera negatives), intermediate, or distribution copies.¹⁾

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard 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 9:1995, *Information and documentation — Transliteration of Cyrillic characters into Latin characters — Slavic and non-Slavic languages.*

ISO 233:1984, *Documentation — Transliteration of Arabic characters into Latin characters.*

ISO 233-2:1993, *Information and documentation — Transliteration of Arabic characters into Latin characters — Part 2: Arabic language — Simplified transliteration.*

ISO 233-3, *Information and documentation — Transliteration of Arabic characters into Latin characters — Part 3: Persian language — Simplified transliteration.*

ISO 259:1984, *Documentation — Transliteration of Hebrew characters into Latin characters.*

ISO 259-2:1994, *Information and documentation — Transliteration of Hebrew characters into Latin characters — Part 2: Simplified transliteration.*

ISO/DIS 259-3, *Information and documentation — Transliteration of Hebrew characters into Latin characters — Part 3: Phonemic conversion.*

¹⁾ Non-silver-halide microfilms may be used for intermediate or distribution copies.

- ISO 446:1991, *Micrographics — ISO character and ISO test chart No. 1 — Description and use.*
- ISO 543:1990, *Photography — Photographic films — Specifications for safety film.*
- ISO 3297:1986, *Documentation — International standard serial numbering (ISSN).*
- ISO/DIS 3297, *Information and documentation — International standard serial number (ISSN).*
- ISO 3334:1989, *Micrographics — ISO resolution test chart No. 2 — Description and use.*
- ISO 3602:1989, *Documentation — Romanization of Japanese (kana script).*
- ISO 4087:1991, *Micrographics — Microfilming of newspapers for archival purposes on 35 mm microfilm.*
- ISO 5123:1984, *Documentation — Headers for microfiche of monographs and serials.*
- ISO 5127-2:1983, *Documentation and information — Vocabulary — Part 2: Traditional documents.*
- ISO 5466:1996, *Photography — Processed safety photographic films — Storage practices.*
- ISO 6148:1993, *Photography — Film dimensions — Micrographics.*
- 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 6196-5:1987, *Micrographics — Vocabulary — Part 5: Quality of images, legibility, inspection.*
- ISO 6196-6:1992, *Micrographics — Vocabulary — Part 6: Equipment.*
- ISO 6196-7:1992, *Micrographics — Vocabulary — Part 7: Computer micrographics.*
- ISO 6196-8:1998, *Micrographics — Vocabulary — Part 8: Use.*
- ISO 6199:1991, *Micrographics — Microfilming of documents on 16 mm and 35 mm silver-gelatin type microfilm — Operating procedures.*
- ISO 6200:1990, *Micrographics — First generation silver-gelatin microforms of source documents — Density specifications.*
- ISO/DIS 6200, *Micrographics — First generation silver-gelatin microforms of source documents — Density specifications.* (Revision of ISO 6200:1990)
- ISO 8601:1988, *Data elements and interchange formats — Information interchange — Representation of dates and times.*
- ISO 9878:1990, *Micrographics — Graphical symbols for use in microfilming.*
- ISO 9923:1994, *Micrographics — Transparent A6 microfiche — Image arrangements.*
- ISO 10550:1994, *Micrographics — Planetary camera systems — Test target for checking performance.*
- ISO 10602:1995, *Photography — Processed silver-gelatin type black-and-white film — Specifications for stability.*

3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 6196 and the following apply.

3.1 serial publication

publication in print or non-print form that is issued in successive parts, that usually has numerical or chronological destinations, and that is intended to be continued indefinitely, regardless of the frequency of publication (term 2.1.1.2-01 in ISO 5127-2)

4 Rawstock microfilm

For rawstock microfilm, safety microfilm stock that complies with ISO 543 shall be used.

5 Film thickness

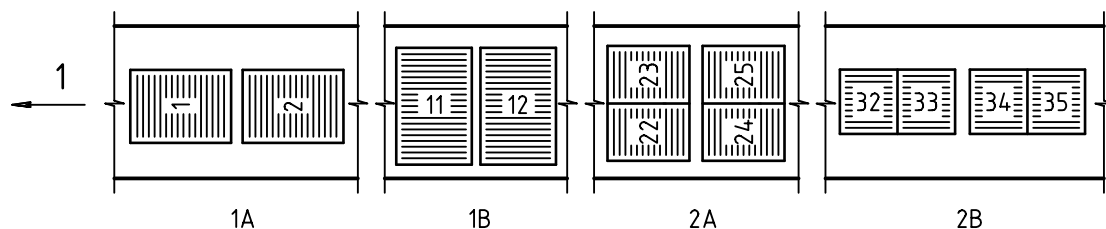
The thickness of the film, including support, sensitive layer, and any protective coating, shall be in accordance with ISO 6148.

6 Image placement and reduction ratios

Image placement and reduction ratios shall be in accordance with ISO 6199 and ISO 9923.

6.1 Image positions

The four typical image positions for 16 mm and 35 mm microfilm are shown in Figure 1.



Key

1 Start of film

NOTE Positions 1A and 1B are single-page exposures. Positions 2A and 2B are double-page exposures. In positions 1A and 2A, the text is perpendicular to the long axis of the film. In positions 1B and 2B, the text is parallel to the long axis of the film.

Figure 1 — Image positions on roll microfilm

Image arrangement on microfiche shall follow ISO 9923. A typical image arrangement is shown in Figure 2.

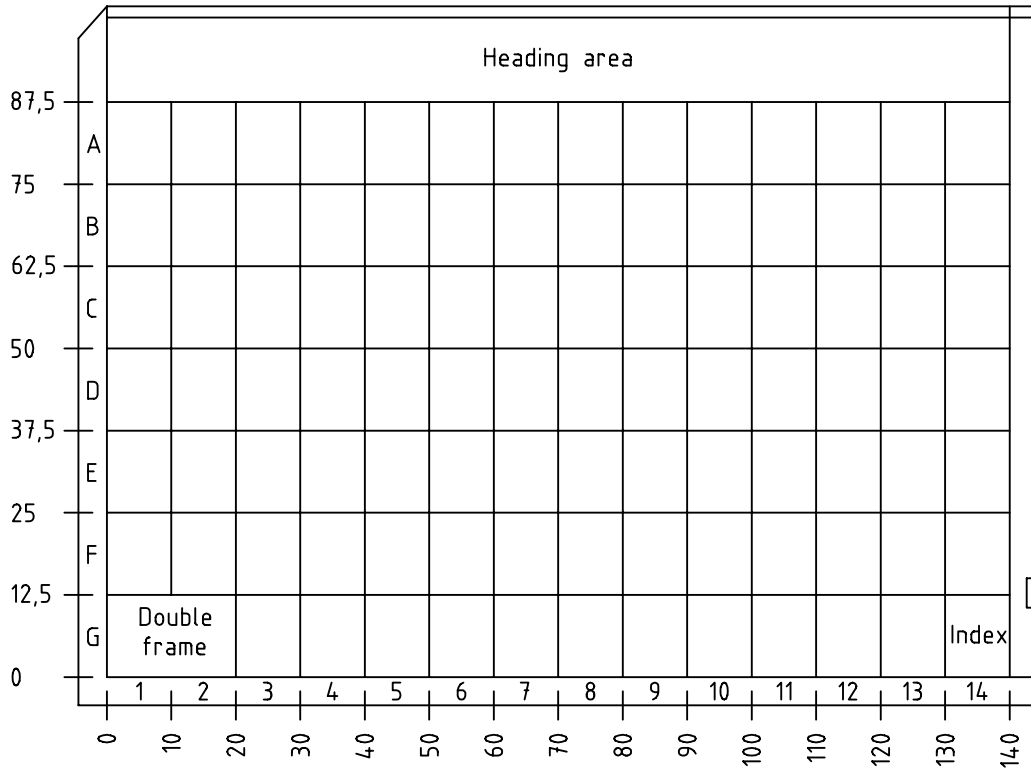


Figure 2 — Image arrangement, 49 or 98 images

6.2 Progression of text

For serials in languages that read from right to left and for other variations from the usual occidental language arrangement, pages shall be positioned to allow for logical reading progression. See ISO 5123 and ISO 9923.

6.3 Reduction ratios for smaller pages and sectional filming

Pages that are smaller than the normal spread of the serial shall be filmed at a reduction ratio that is the same as, or if necessary to achieve legibility, lower than, the reduction ratio used for other parts of the serial. If inserts or foldouts are too large to be accommodated in position 1A (see Figure 1) without using a reduction ratio that is too high to provide a legible image, the material must be filmed in sections. The sections shall be filmed from left to right and from top to bottom, as shown in Figure 3 (unless in oriental orientation) and shall provide an overlap with adjacent material of at least 25 mm. The reduction ratio used shall provide the desired number of sections with the proper overlap.

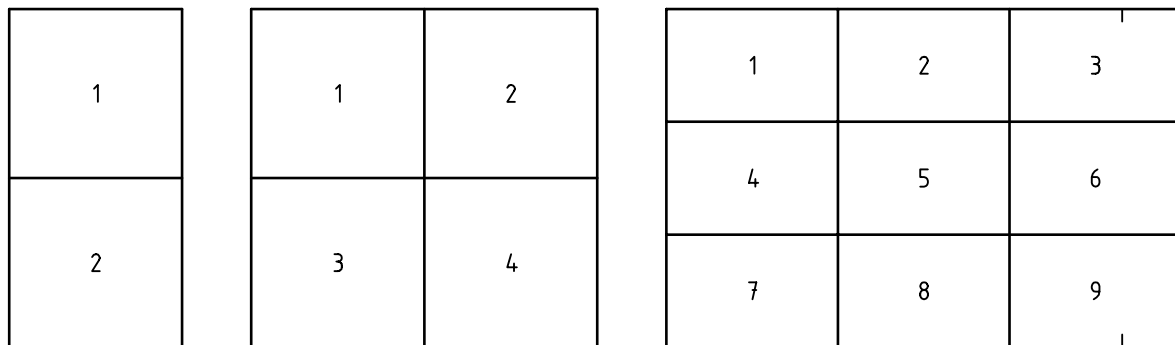


Figure 3 — Sectional sequences

7 Filming procedures

7.1 Show-through

Serials shall be photographed in such a way that show-through from the backs of pages is minimised.

7.2 Filmed area

Serials shall be placed on the document holder and illuminated so that all printing on the page is recorded, even when the serials are in bound volumes.

7.3 Direction of lines of text

Type lines shall be parallel to the long axis of the roll film in positions 1B and 2B or perpendicular to the long axis of the film in positions 1A and 2A (see Figure 1). For microfiche, the lines of text shall usually be parallel to the rows.

7.4 Editorial targets

Editorial targets shall be used to denote material filmed out of sequence for bibliographical or practical reasons. See also ISO 9878.

7.5 Graphic symbols

In accordance with ISO 9878, symbols shall be used to give information concerning the condition of the original document and the production and use of microforms.

7.6 Chronological order of filming

Serials shall be microfilmed in chronological order. The divisions between rolls or microfiche shall be systematic and bibliographically acceptable. See ISO 4087 for details on roll film.

8 Film targets

8.1 Identification and bibliographic lettering

The microfiche headings and information targets on roll films intended to be read without magnification shall comply with ISO 4087 for roll film and ISO 5123 for microfiche. Such headings and information targets shall also comply with the following requirements:

- lettering shall be clear black on a white background or vice versa;
- the minimum letter height on the film shall be 2 mm for roll film and 1.6 mm for microfiche.

Uppercase letters are preferred.

8.2 Language

The language of the targets shall be the language of the serial to be microfilmed or one of the official ISO languages, i.e., English, French, or Russian.

8.3 Calendar dates

Calendar dates in all-numeric forms shall be written in accordance with ISO 8601.

8.4 Sequence and content of targets

Figure 4 illustrates the sequence and content of targets on roll microfilm.

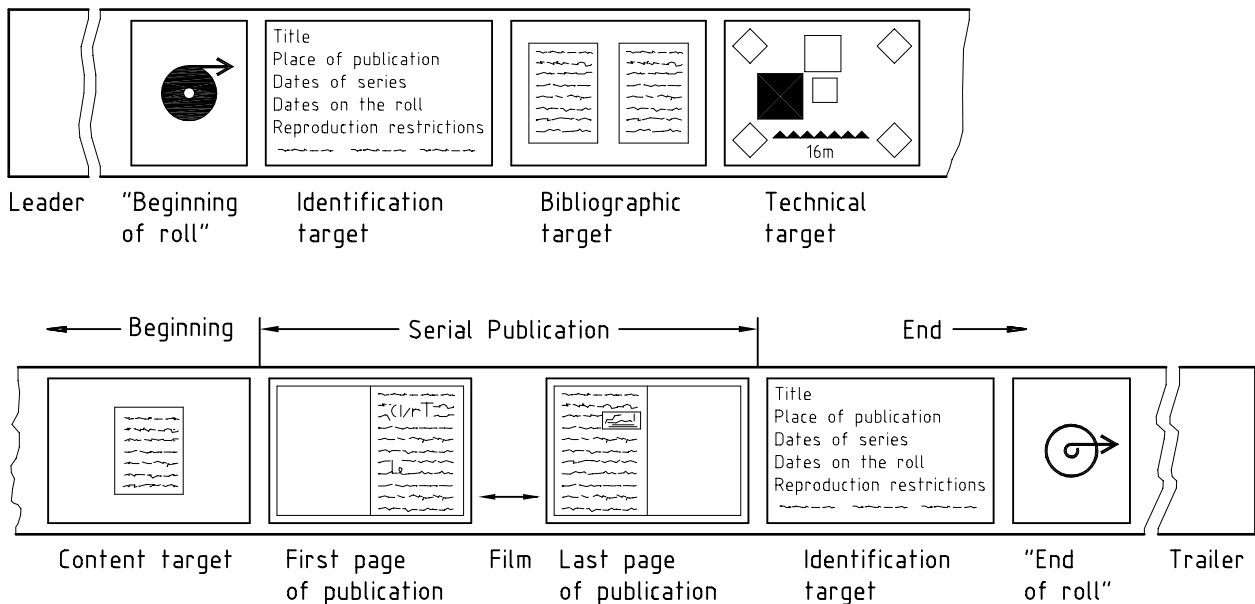


Figure 4 — Sequence of the targets on roll microfilm

On microfiche, a technical target shall be recorded according to ISO 9923, either in the image frame following the last image of the serial recorded or in the first frame. A bibliographic target and other optional targets can be placed before the first image of the serial.

8.4.1 "Beginning of roll" symbol for roll film only

The first target shall contain only the "beginning of roll" symbol (see ISO 9878).

8.4.2 Identification information in targets and headings

The identification information is contained in

- identification targets for roll film;
- identification targets and headings for microfiche.

The identification information is intended to provide the reader with essential data concerning the serial as a whole and the microfilming. With the exception of items d to g below, the identification information shall be legible without magnification and shall contain the items in the following list in the order given. This information is mandatory, unless otherwise stated.

- a) The title, given in the same form as the title of the original or, when necessary, converted into the Latin alphabet according to standardized transliteration/transcription tables (see ISO 9, ISO 233, ISO 259, and ISO 3602); the title may be used for bibliographic purposes and should, therefore, be chosen with care;
- b) ISSN, when given (see ISO 3297);
- c) Language of the serial (optional);
- d) Country and place of publication, converted if necessary into the Latin alphabet according to the standardized transliteration/transcription tables (see ISO 9, ISO 233, ISO 259, and ISO 3602);
- e) Date of the first issue (and last issue if publication has been discontinued), expressed according to ISO 8601 (optional);
- f) Identification of the organization responsible for microfilming;

- g) Year of filming;
- h) Volumes, years, and numbers microfilmed on the roll; any gaps in the sequence should be noted;
- i) Where applicable, copyright or other restrictions on the further reproduction or use of the film.

8.4.3 Bibliographic target (not readable without magnification) (optional)

The purpose of the bibliographic target is to ensure that all bibliographic data necessary for the complete verification of the contents of the film have been recorded.

8.4.3.1 Targets

To facilitate bibliographic verification and description of the microfilm, the target may contain all or part of the following information.

Identification

- identification title, including the year or date of first issue
- place of publication
- described period

Bibliographical description

- complete title
- title variations (with indication of period)
- recording of the imprint

Annotations

- publisher and place of publication
- composing office (in case it differs from the printing office)
- printing office
- editors
- main editorial office (in case it differs from the place of publication)
- color (black and number of colors)
- assimilations
- predecessors and successors
- literature

Microfilming

- original (copies used for the filming)
- notes concerning the microfilming
- owner of the first-generation microfilm (camera negative), if other than the microfilm publisher

Further information can be added if needed.

8.4.3.2 Issue dates

In the case of a completed series, a complete listing of the dates of issues appearing on the rolls should be given. Missing pages or issues shall also be noted. (See example.)

EXAMPLE

Roll 1: number to number (missing issues between number and number.). (This information would be included in addition to general notes, such as "Volumes [1890] [1821] incomplete." See 8.4.3.3.)

8.4.3.3 Condition

A general description of the condition of the periodical may be included as a footnote. This general description may contain a list of missing pages or concise statements about the condition of the originals, such as the following:

- "certain numbers missing";
- "original partly damaged";
- "some originals faded";
- "unique incomplete set."

If located and filmed at a later date, material noted as missing at the time of filming may be placed at the end of the appropriate roll or on one or more supplementary rolls.

8.4.4 Historical target (optional)

A short target providing the history of the periodical is recommended. This target shall consist of one frame only and should contain the following details:

- important dates in the history of the periodical;
- names of the editors;
- names of outstanding correspondents, feature writers, illustrators, scientists, or others associated with the periodical.

8.4.5 Technical target

A technical target shall be included on each roll film (in accordance with ISO 6199) and microfiche (in accordance with ISO 9923). The technical target shall contain the following:

- reflectance targets;
- reduction ratio used;
- a metric reference graduation;
- ISO test chart No. 1 or No. 2;
- the appropriate symbol indicating whether the original document was in color or black and white.

8.4.6 List of graphic symbols and their meanings (optional)

A list of graphic symbols and their meanings may be included with the targets.

8.4.7 Repetition of identification target for roll film only

The identification target shall be repeated at the end of the film.

8.4.8 "End of roll" symbol for roll film only

The last frame shall contain only the "end of roll" target (see ISO 6199 and ISO 9878).

8.5 Additional targets for roll film only

8.5.1 Dividing targets

A target can be used to clearly subdivide the contents of a roll. For example, for monthly or annual divisions, the target shall contain the data used for the subdivision in clear lettering that is readable without magnification, as in the following:

- Vol. 37 (1968);
- Vol. 38 (1969).

8.5.2 Missing sections

Sections that are missing from the original shall be indicated by means of a symbol from the list of symbols; however, the possibility exists that the film will be completed later (see 11.2). One frame shall be used whenever a part is missing. This frame shall include the ISO symbol for "missing pages and/or issues" (see ISO 9878).

9 Processing the exposed film

The film shall be processed in accordance with ISO 10602.

10 Quality

10.1 Resolution

To determine the quality of the microimages, the technical target on the microfilm shall be examined as described in ISO 446 or ISO 3334. The minimum quality requirements for the first and second generations shall comply with the values given in ISO 6199, Annex E.

10.2 Visual density

The microimages shall have a background density in accordance with ISO 6200.

11 Correcting the processed first-generation microfilm (camera microfilm) for roll film only

11.1 Refilming

Pages that are improperly filmed shall be refilmed, leaving enough blank pages before and after each instance to allow space for splices and to eliminate the possibility of defacing the images. The remade film shall be inspected and spliced into the negative, replacing the faulty film.

11.2 Splices

Heat-weld splices are generally recommended for film with a triacetate base, and ultrasonic splices are recommended for film with a polyester base. If cemented splices are used, the cement shall not contain acetic acid or other chemicals that will affect long-term storage of the film. No type of tape shall be used for making splices, unless the adhesive is formulated so that it does not damage the long-term storage qualities of the film and will not migrate from under the splice.

Every effort shall be made to minimize the number of splices. Splices shall be made in the first-generation microfilm before any duplicates are printed.

12 Intermediate copies

The first-generation microfilm (camera microfilm) shall not be used for routine purposes or for making distribution copies. The intermediate copies (second-generation copies duplicated from the first-generation microfilm) shall be used only to produce distribution copies.

13 Distribution copies

The distribution copy is a microform intended for actual use from which an acceptable hard copy or other microfilm copy can be obtained. Distribution copies shall be without splices and shall have a leader and trailer in accordance with ISO 6199.

13.1 Silver-gelatin microfilm

Silver-gelatin microfilm intended for distribution copies shall be processed in accordance with the requirements of ISO 10602.

13.2 Spooling

The reel shall not be overspoiled. When wound onto the reel, the spooled film shall have a diameter that is at least 6 mm less than the diameter of the reel. In complying with this requirement, the practice of clinching the film shall be avoided.

14 Storage

Procedures and specifications for storage shall be in accordance with ISO 5466.

15 Container label

The container label shall adequately identify the contents. The minimum information should include the following:

- title of serial;
- place of publication (including country);
- numbers of the first and last issues;
- period on the roll (if any);
- roll number (if any).

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