

INTERNATIONAL STANDARD

**ISO
7247**

First edition
1993-09-15

Photography — Film dimensions — Film for documentary reproduction

*Photographie — Dimensions des films — Films pour reproduction de
documents*



Reference number
ISO 7247:1993(E)



Documents
Document Sharing Hub

ISO 7247:1993(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 7247 was prepared by Technical Committee ISO/TC 42, *Photography*.

Annexes A and B form an integral part of this International Standard. Annexes C and D are for information only.

© ISO 1993

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

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

Printed in Switzerland

Photography — Film dimensions — Film for documentary reproduction

1 Scope

This International Standard specifies the nominal sizes and aim dimensions, with their tolerances, of photographic films in sheets and rolls, used for documentary reproduction.

It also specifies the requirements for shape of sheets, core dimensions and winding for films in rolls, and package marking.

It applies to silver-gelatin and diazo films as well as to films used in the silver complex diffusion transfer process.

The corresponding International Standard for papers is ISO 7272.

In this International Standard, metric units are prime.

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 1:1975, *Standard reference temperature for industrial length measurements*.

ISO 216:1975, *Writing paper and certain classes of printed matter — Trimmed sizes — A and B series*.

1) To be published.

2) All measuring instrument calibrations should be referred to a temperature of 20 °C (as specified in ISO 1) and a relative humidity of 50 %.

ISO 554:1976, *Standard atmospheres for conditioning and/or testing — Specifications*.

ISO 7272:—¹⁾, *Photography — Paper dimensions — Paper for documentary reproduction*.

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 documentary reproduction: Photographic reproduction of line documents (drawings, diagrams and text) generally to the same scale, possibly to a slightly different one, for example between 0,75 and 1,25 to 1.

NOTE 1 This definition excludes other parts of reprography, even if the same photosensitive films are used: graphic arts which deals with reproduction at any scale, photocomposition, micrography, electrostatic photography and offset printing.

Other International Standards exist or are in preparation for most of these applications.

4 Conditions for measurement of dimensions

The dimensions and tolerances specified in this International Standard apply at the time of manufacture, measured under atmospheric conditions of $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity, as specified in ISO 554²⁾ (see annex C).

ISO 7247:1993(E)

5 Films in sheets

5.1 Dimensions

5.1.1 Preferred sizes

Nominal and aim dimensions for preferred sizes of sheets shall conform to the values given in table 1.

Table 1 lists "A" sizes derived from writing paper series, specified in ISO 216 and which will be used increasingly in the future. The "A + margin" series is described in annex A.

Table 1 — Preferred sizes of films in sheets

Nominal cm	Aim ¹⁾ mm
14,8 × 21 (A5)	146,0 × 208,0
21 × 29,7 (A4)	208,0 × 295,0
29,7 × 42 (A3)	295,0 × 418,0
42 × 59,4 (A2)	418,0 × 592,0
59,4 × 84,1 (A1)	592,0 × 838,5
84,1 × 118,9 (A0)	838,5 × 1 186,5

1) Aim dimensions used in film manufacturing are smaller than those used for paper manufacturing.

5.1.2 Cutting and tolerance rules for preferred sizes

The cutting and tolerance rules for preferred sizes of sheets shown in table 1 and for new metric sizes of sheets shall be as given in table 2.

Table 2 — Cutting and tolerance rules for preferred sizes of films in sheets

Nominal (N) cm	Aim mm	Tolerance mm
$N \leq 12$	$N - 1,5$	$\pm 0,5$
$12 < N \leq 65$	$N - 2,0$	$\pm 1,0$
$65 < N$	$N - 2,5$	$\pm 1,5$

NOTE — These cutting rules recognize that aim dimensions of film sheets are smaller than those of paper sheets of the same nominal size.

5.1.3 Recognized sizes

Nominal and aim dimensions for temporarily recognized sizes of sheets and their tolerances shall conform to the values given in table 3.

Table 3 — Recognized sizes of films in sheets

Nominal ¹⁾ cm	Aim mm	Tolerance mm
20,3 × 25,4	201,6 × 252,8	$\pm 0,8$
21,6 × 27,9	215,1 × 278,6	$\pm 0,8$
25,4 × 30,5	252,8 × 303,2	$\pm 0,8$
27,9 × 35,6	278,6 × 354,8	$\pm 0,8$
30,5 × 45,7	304,0 × 456,4	$\pm 0,8$
35,6 × 43,2	354,8 × 431,0	$\pm 0,8$
40,6 × 50,8	405,6 × 507,2	$\pm 0,8$
50,8 × 61,0	507,2 × 608,8	$\pm 0,8$
61 × 76,2	608,8 × 761,2	$\pm 0,8$

1) These sizes were originated in inches. This explains why aims and tolerances do not follow the rules in table 2. See annex B for full information concerning inch sizes and their correspondence with metric sizes.

Equipment manufacturers are encouraged, however, to design future equipment to accept only the preferred sizes listed in table 1.

5.2 Squareness and edge straightness

Squareness, edge straightness, shape and compliance with dimensions specified in this International Standard shall be checked at the same time by comparison of any given sheet with two perfect rectangles, independently located, one made to the minimum dimensional tolerance specified in this International Standard and the other to the maximum tolerance. No point on the perimeter of the sheet shall fall within the smaller rectangle nor shall any point fall outside the larger rectangle.

6 Films in rolls

6.1 Width of rolls

6.1.1 Preferred widths

Nominal and aim dimensions for preferred widths of rolls shall conform to the values given in table 4. The "A + margin" series is described in annex A.

Table 4 — Preferred widths of films in rolls

Nominal cm	Aim mm
21 (for A5 and A4)	208,0
29,7 (for A4 and A3)	295,0
42 (for A3 and A2)	418,0
84,1 (for A1 and A0)	838,5

6.1.2 Slitting and tolerance rules for preferred widths

The slitting and tolerance rules for preferred widths