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# International Standard



# 4243

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## **Cinematography — Picture image area and photographic sound record on 16 mm motion-picture release prints — Positions and dimensions**

*Cinématographie — Champ d'image enregistré et enregistrement sonore photographique sur les copies d'exploitation sur film cinématographique de 16 mm — Emplacement et dimensions*

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**Descriptors :** cinematography, motion-picture film, motion-picture film 16 mm, prints, photographic recording, sound recording, images, position (location), layout, dimensions.

## 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 4243 was developed by Technical Committee ISO/TC 36, *Cinematography*, and was circulated to the member bodies in December 1978.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Romania
Austria	Ireland	South Africa, Rep. of
Belgium	Italy	Spain
Canada	Japan	Sweden
Czechoslovakia	Korea, Rep. of	Switzerland
Denmark	Mexico	United Kingdom
Egypt, Arab Rep. of	Netherlands	USSR
France	Poland	Yugoslavia

The member body of the following country expressed disapproval of the document on technical grounds :

USA

# Cinematography — Picture image area and photographic sound record on 16 mm motion-picture release prints — Positions and dimensions

## 1 Scope and field of application

1.1 This International Standard specifies positions, dimensions and location of image and photographic sound record on 16 mm release prints.

1.2 It also specifies the width and lateral position of the sound record scanning beam and its relative displacement with respect to the corresponding picture image frame.

## 2 References

ISO 25, *Cinematography — Camera usage of 16 mm motion-picture film — Specifications.*

ISO 26, *Cinematography — Projector usage of 16 mm motion-picture films for direct front projection — Specifications.*

ISO 69, *Cinematography — 16 mm motion-picture raw stock film — Cutting and perforating dimensions.*

ISO 71, *Cinematography — 16 mm negative photographic sound record on 16 mm, 35/16 mm and 35/32 mm motion-picture film — Position and dimensions.*

ISO 359, *Cinematography — Projectable image area on 16 mm motion-picture prints — Dimensions and location.*

ISO 466, *Cinematography — Image produced by 16 mm motion-picture camera aperture — Position and dimensions.*

ISO 490, *Cinematography — Magnetic stripes and magnetic recording head gaps for sound record on 16 mm motion-picture film perforated along one edge (Type 1) — Positions and width dimensions.*

## 3 Dimensions

3.1 The dimensions shall be as shown in the figure and given in the table.

3.2 The sound recording and reproducing slit images shall be positioned at an angle of  $90^\circ \pm 5'$  with respect to the reference edge of the film.

3.3 Dimensions are given relative to unshrunk safety film.

## 4 Picture sound displacement

The recording of sound on the film shall precede the corresponding picture frame in the direction of film travel in normal projection. The distance between the horizontal centre line of the picture frame and its corresponding sound record shall be 26 frames + 1 frame, and preferably 26 frames  $\pm$  0,5 frame.

## 5 Emulsion orientation

The preferred emulsion orientation of 16 mm sound motion-picture prints is toward the projection lens when the film is threaded for direct front projection.

NOTE — 16 mm motion-picture prints may be made with the emulsion side either towards the projection lens or towards the light source. There should not be different emulsion orientation in the same reel. The position should be indicated in the leader, or on the container.

## 6 Reproducing speed

The recording shall be made so that the sound record will reproduce properly at 24 perforations per second [approximately 11 m (36 ft) per minute or 18,3 cm (7.2 in) per second]. This equivalent to the projection speed of the picture film of 24 frames per second.