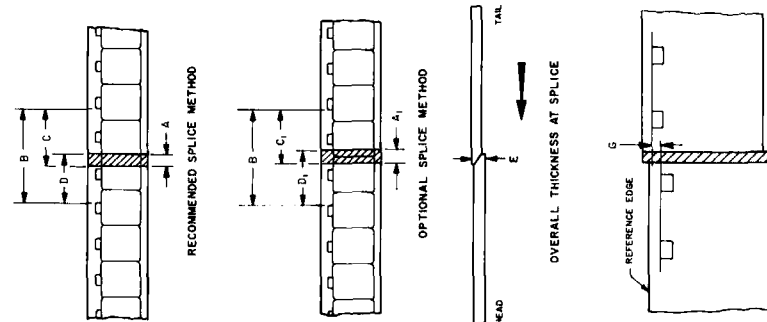


Dimensions of Cemented Splices on 8-mm Type S Motion-Picture Film, Projection Type

Page 1 of 2 pages



1. **Scope**
This practice specifies the dimensions of cemented splices on 8-mm Type S motion-picture film primarily intended for projection.
2. **Dimensions**
 - 2.1 The dimensions shall be as given in the figure and table. The position of the splice is defined by Dimensions C and D.
 - 2.2 The film width at the splice shall not exceed 8.08 mm (0.318 in). If the film has been widened during scraping, the extra material shall be removed.
 - 2.3 The spliced films shall not be offset by more than 0.05 mm (0.002 in). Dimension G, as measured by the difference in the alignment of the reference edge side of the perforation holes on either side of the spliced halves.
 - 2.4 The angle between the respective edges of the spliced film shall be 180° ± 8°. Thus, the spliced portion of the film is placed against a straight edge, the other portion will not deviate more than 0.35 mm (0.014 in) in 15.2 cm (6 in).

NOTE: The splice should never cut into or include a perforation.

Dimensions	Millimeters	Inches
A	1.40 ± 0.20	0.055 ± 0.008
A ₁	1.40 ± 0.38	0.055 ± 0.015
B*	11.53 ± 0.03	0.454 ± 0.001
C	7.19 ± 0.10	0.283 ± 0.004
C ₁	6.48 ± 0.18	0.255 ± 0.007
D	5.79 ± 0.03	± 0.001
D ₁	5.79 — 0.10	0.228 — 0.004
D ₂	6.48 ± 0.18	0.255 ± 0.007
E	0.30 max	0.012 max
G	0.05 max	0.002 max

*Dimension B is based on a perforation pitch of 4.23 mm (0.1667 in). Allowance has been made for .2% film shrinkage.

Appendix

(The Appendix is not a part of this SMPTÉ Recommended Practice, but is included for information purposes only.)

A1. Splices for 8-mm Type S films have been made narrower than conventional 8-mm splices because narrower splices are less conspicuous on the screen and are less likely to affect the usual curvature of the film as it follows the bends in its path through cine machinery.

A2. Dimension B controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks and to the nearer edges of these perforations because they are the edges generally used.

A3. In the figure, the splice is arranged with the perforations at the top in order to show them as they appear on

most splicers. Bevelled splices are recommended, especially for films which will be run over magnetic heads. However, if unbevelled overlap splices are made, it is desirable to orient the films in splicing so that a magnetic head scanning the film would, at a splice, drop down onto the trailing film rather than bump up onto it.

A4. The scraped area should be limited as closely as possible to the area covered by the overlapping film, in order to prevent the appearance of a white line on the screen.

A5. Cemented splices are not preferred over taped splices for use in continuous-loop systems.

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SMPTE RECOMMENDED PRACTICE
Dimensions of Tape Splices on 8-mm Type S Motion-Picture Film, Projection Type

Page 1 of 3 pages

1. Scope

This practice specifies the dimensions of mated cut splices on 8-mm Type S motion-picture film made with an adhesive tape and intended only for projection.

2. Dimensions

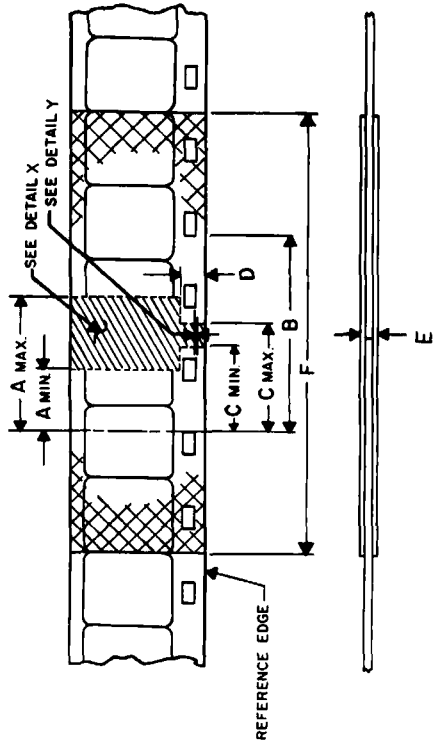
- 2.1 The dimensions shall be as given in the figures and table and apply to a freshly-made splice.
- 2.2 The mated cut of the film shall fall within the area defined by Dimensions A, C, and D. However, if the mated cut is not a straight cut made on one frame line, the cut configuration shall intrude into only one of the two adjoining picture frames.
- 2.3 The spliced films shall not be offset by more than 0.05 mm (0.002 in). Dimension G, as measured by the difference in the alignment of the reference side edge of the perforation holes on either side of the spliced halves.
- 2.4 The angle between the respective edges of the spliced film shall be $180^\circ \pm 8'$. Thus, the spliced film shall be aligned to the extent that, when one portion of the film is placed against a straight edge, the other portion will not deviate more than 0.35 mm (0.014 in) in 15.2 cm (6 in).
- 2.5 Except as described in 2.6 below, the dimensions of the tape applied to secure the splice shall be such as not to interfere with the film dimensions (especially perforations) as specified in American National Standard Dimensions for 8-mm Motion-

Picture Film Perforated 8-mm Type S, IR, ANSI PH22.149-1981, and fall within the area described by Dimension F. The width of the adhesive material should encompass the full width of the film on one side; however, on the second side, it may exclude the perforation area and the sound stripe area.

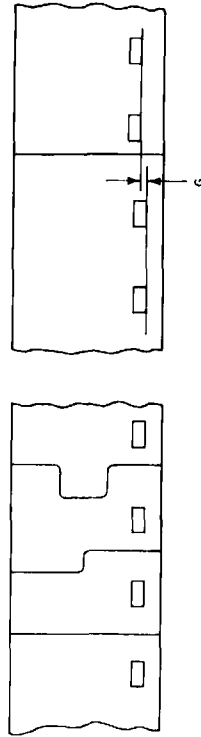
2.6 If the tape used to form a splice is wrapped around the film, either film edge may be used as the wrap-around edge. However, if the perforated edge is used, it is recommended that the splice add no more than 0.05 mm (0.002 in) to the film width. The overall width of the spliced area should not exceed 8.10 mm (0.319 in). If the film is trimmed after the wrap-around splice has been made, the film width shall not be less than 7.92 mm (0.312 in) and shall not affect the perforated edge of the film. Wrap-around splices are not preferred inasmuch as they interfere with the reproduction of magnetic audio records, and should be used only when additional strength is required such as for continuous-loop systems.

NOTE 1: The splice should have a negligible gap between the mated cuts of the film ends and there should not be any film overlap at the splice. (See Appendix A6.)

NOTE 2: Films joined with tape splices are not acceptable for use as originals in commercial printing operations or those intended for magnetic striping. (See SMPTE Recommended Practice on Dimensions of Cemented Splices on 8-mm Type S Motion-Picture Film, Projection Type, RP 122, for such usage.)



OVERALL THICKNESS AT SPLICE



DETAIL X
 TYPICAL SPLICE CUT CONFIGURATIONS

DETAIL Y
 ALIGNMENT DIMENSION SPECIFICATION

Dimensions	Millimeters	Inches
A	8.66 min	0.144 min
	7.90 max	0.311 max
B*	11.53 ± 0.05	0.454 ± 0.001
C	5.00 min	0.197 min
	6.55 max	0.258 max
D	1.57 min	0.062 min
	0.25 max	0.010 max
E	25.4 max	1.00 max
F	0.05 max	0.002 max

*Dimension B is based on a perforation pitch of 4.23 mm (0.1667 in). Allowance has been made for 2% film shrinkage.

Appendix

(The Appendix is not a part of this SMPTE Recommended Practice, but is included for information purposes only.)

A1. The transverse cut to provide the mated pairs of film for the tape splice may be made in numerous configurations. Detail X shows only some typical configurations. It is desirable, however, to make the splice as inconspicuous as possible; therefore, the transverse cuts would usually be on the frameline or occur in only one frame.

A2. Dimension B controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks, and to the nearer edges of these perforations, because they are the edges generally used.

A3. If tape splices are made with films to which magnetic oxide has been applied or may be applied, it will be necessary to exclude the splicing material from the magnetic record stripe area.

A4. Visual disruption of the projected image caused by the splice will be minimized if the length of the splicing tape, Dimension F, is kept as short as possible within the re-

quirements of dimensional stability. It is anticipated that, as adhesives are improved, the length of the splicing tape may be reduced to one or two frames. Ideally, the ends of the tape should fall on the framelines to minimize visual disruption.

A5. When the tape splice is used for special applications such as the repair or joining of the ends in a continuous-loop cartridge, the cut configuration should be made wider, as shown on the right side in Detail X, to promote better performance in the projection mechanism. To minimize malfunctions caused by splices in continuous-loop cartridges, tape should always be applied to both sides of the film. In certain types of cartridges, when two separate pieces of splicing tapes are used, a more reliable splice is produced when the tapes are offset by one frame.

A6. When bent into an arc of approximately 50-mm (2-in) diameter, the spliced film should flex smoothly, with no excessive stiffness or tendency to fold. Tape should always be applied to both sides of the film.

Cinematography — 16 mm motion-picture film perforated 8 mm Type S (1-3) and (1-4) — Cutting and perforating dimensions

1 Scope and field of application

This International Standard specifies the cutting and perforating dimensions for 16 mm motion-picture raw stock perforated 8 mm Type S in positions 1-3 and 1-4, as well as the width of motion-picture film after processing and slitting.

2 References

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

ISO 1700, *Cinematography — 8 mm Type S motion-picture raw stock film — Cutting and perforating dimensions*.

NOTE — ISO 1700 is included as a reference guide as 8 mm Type S film is more commonly encountered in that format.

3 Dimensions

The dimensions and tolerances shall be as shown in the figures and given in the table; they apply to safety raw stock film as described in ISO 543, immediately after cutting and perforating.

The dimensions apply at the time of cutting and perforating for film adjusted to a temperature of 23 ± 1 °C, and a relative humidity of 50 ± 2 %. The manufacturer may indicate other nominal temperature and humidity conditions under which the dimensions apply.