

Library of Congress Preservation Directorate
Specification Number 200-234 – 16
Specifications for Button and String Tie Reel Tags
For Microfilm Reels, 35 mm

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1. Composition and Chemical Requirements

1.1 Fiber

The stock must be made from rag or other high alpha-cellulose content pulp, minimum of 87%. It must not contain any post consumer waste recycled pulp.

1.2 Lignin

The stock must give a negative reading for lignin as determined by the phloroglucinol test when tested according to TAPPI T 401, Appendix F, and shall have a Kappa number of 5 or less when tested according to TAPPI T 236.

1.3 Impurities

The stock must be free of metal particles, waxes, plasticizers, residual bleach, peroxide, sulfur (which will be less than 0.0008% reducible sulfur as determined by TAPPI T 406), and other components that could lead to the degradation of the tag itself, or the microfilm.

1.4 Metallic Impurities

Iron must not exceed 150 ppm and copper shall not exceed 6 ppm when tested according to TAPPI T 266.

1.5 Optical Brighteners

The stock must be free of optical brightening agents.

1.6 pH

The stock must have a pH value within a range of 8.0 - 9.5 as determined by TAPPI T 509, cold extraction (modified by slurring sample pulp before measurement).

1.7 Alkaline Reserve

The stock must contain an alkaline reserve with a minimum of 2% and a maximum of 5% calculated as CaCO₃ when tested according to TAPPI T 553 (modified by slurring sample pulp before measurement).

1.8 Sizing

Only neutral or alkaline sizing shall be used. No alum rosin or rosin sizing should be used, as determined by TAPPI T 408.

2. Physical and Performance Requirements

2.1 Thickness

The stock for the reel tags should be composed of 10 pt card stock, measuring 0.010 ± 0.001 inch, as determined by TAPPI T 411, unless otherwise specified on the purchase order.

2.2 Color

The color of the stock and the button should be tan, cream, or buff. The color must not be so dark that it obscures color-dependent test evaluations, e.g., spot stain tests.

2.3 Color Bleeding

The color of the stock and the button must show no bleeding when soaked in distilled water for 48 hours while held under suitable weight in contact with white bond paper. The color must not rub off.

2.4 Photographic Activity Test

The stock, and any adhesives used, must pass the Photographic Activity Test (P.A.T.), meeting the criteria stipulated in sections 5.3, 6.3, and 7.2 of ISO 18916. Vendors may wish to confirm that their products pass the P.A.T. before submitting them to the Library of Congress for evaluation. The vendor may wish to send samples to the Image Permanence Institute (Rochester Institute of Technology/IPI, 70 Lomb Memorial Drive, Rochester, NY 14623-5604; Tel: 585-475-5199), or other testing laboratory, to determine conformance prior to submission.

2.5 Surfaces and Smoothness

The surfaces of the stock must be free of fingerprints, dirt, bubbles, knots, shives and other imperfections. The stock should be smooth, e.g., calendered, hot-rolled, and/or water polished.

2.6 Creases and Folds

The stock must not fray, crack or split when folded and/or creased.

2.7 Adhesive

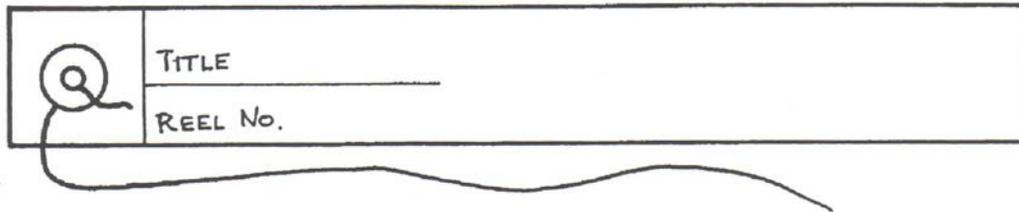
If an adhesive is required, it must not soften or run. The adhesive must not cause the stock to become transparent or alter the color of the stock. The adhesive must not yellow, discolor, or fail (causing delamination) over time. The adhesive should not contain sulfur, iron, copper or other ingredients that may be detrimental to photographic materials, and is required to pass the P.A.T. The adhesive should not contain or generate oxidants. Pressure-sensitive or rubber-based adhesives are not acceptable. When used, the adhesive must not extend beyond the joined area.

3. Product Requirements

3.1 Construction

The reel tags must be constructed with a button at one end with a string (14 inches) that is long enough to reach around the circumference of a fully loaded 35 mm microfilm reel at least one time with sufficient length to wrap around the button several times to secure the tag in place.

(Illustration below)



Microfilm Reel Tag

3.2 Workmanship

The reel tags must be cut straight with squared sides. The sizes must be accurate. The edges must be smooth and even.

3.3 Dimensions

The dimensions of the reel tags should be $1\frac{3}{8}$ W x $12\frac{1}{2}$ " L for 35 mm film.

3.4 Thickness

Microfilm reel tags should be constructed of 10 pt card stock.

3.5 Marking

Each tag must be marked with the words Title and Reel No.

3.5.1 Placement and Size

A horizontal line must be printed next to the button to form a square space around the button with the top and bottom cut edges of the tag. The printed information must be placed on the tag to the right of the horizontal printed line, separated by a vertical line, as shown in the illustration in 3.1. The vertical line must be a minimum of $12\frac{1}{2}$ inches in length.

3.5.2 Marking Method

The information must be stamped in ink.

3.5.2.1 Ink Stamping

The stamping must be done on the outside of the tag. The stamping must be on the surface only, and not have any embossing effects. The ink must pass the

Photographic Activity Test as described in ISO 18916. The ink must not smear, fade, or rub off after drying. The ink must not run, bleed through, or transfer to other materials if it becomes wet. There must be no ink on the interior of the tag.

4. Packaging and Identification

4.1 Inner Packages

Each package must plainly identify the type, size and number of items within, the name of the supplier or manufacturer, year of manufacture, and manufacturing run or batch number.

4.2 Outer Package

The items must be packed in standard commercial containers that are constructed to ensure that they arrive at the Library of Congress in dry, undamaged condition. The outside of each container must be identified by type, size and number of items within; manufacturing run or batch number; LC Purchase Order / Contract number and line number.

5. Compliance with Specification

5.1 Quality Assurance Testing

The Library of Congress has the right to perform any of the tests set forth in the specification where such tests are deemed necessary to ensure that supplies conform to prescribed requirements.

5.2 Sampling

To sample for testing, shipments will be sampled according to ANSI/ASQ Z1.4, inspection level S-2, AQL 2.5%.

5.3 Methods

Tests will be conducted in accordance with specified test methods of the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), the Technical Association of the Pulp and Paper Industry (TAPPI), and the International Organization for Standardization (ISO). Publications describing these tests may be ordered directly from the technical associations, their websites, or other on-line standards vendors.

5.4 Acceptance

Materials will be accepted when the Library of Congress has ascertained that the products comply with all parts of the specification. A quick reference table of the physical and chemical requirements and test methods used to ascertain compliance is provided in section 5.5.

FAILURE TO MEET ANY PART OF THE SPECIFICATION WILL BE CAUSE FOR REJECTION

5.5 Table of Physical and Chemical Requirements and Test Methods

Property	Requirement	Test Method
Lignin	Negative / Kappa 5	TAPPI T 401, Appendix F or TAPPI T 236
Reducible Sulfur	< 0.0008%	TAPPI T 406
Iron	≤ 150 ppm	TAPPI T 266
Copper	≤ 6 ppm	TAPPI T 266
pH	8.0 – 9.5	TAPPI T 509, cold extraction, slurried pulp
Alkaline Reserve	2 – 5%	TAPPI T 553, slurried pulp
Alum Rosin Sizing	Negative	TAPPI T 408
P.A.T.	Pass	ISO 18916
Color Bleeding	No bleed in 48 hours	See section 2.3

Configuration Management

Date	Revision History
30-Sept-2016	Initial release of document, PDF format.