

DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS  
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UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR  
TUCK'S PACKING

FEDERAL SPECIFICATIONS BOARD SPECIFICATION No. 113a

[Revised June 15, 1925]

This specification was officially promulgated by the Federal Specifications Board on December 29, 1923, for the use of the Departments and Independent Establishments of the Government in the purchase of Tuck's packing

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I. TYPES

Tuck's packing shall be furnished in two types as required—type A, square; type B, round.

II. MATERIAL AND WORKMANSHIP

1. Tuck's packing shall consist of frictioned cotton canvas layers.
2. Round Tuck's shall be made with a rubber core unless otherwise specified.

III. GENERAL REQUIREMENTS

1. The cotton canvas layers shall be built up on the bias and shall conform in dimensions, plies, and texture to Table 1.

TABLE 1

Sizes	$\frac{1}{4}$ - $\frac{3}{8}$ inch	$\frac{1}{2}$ - $\frac{7}{8}$ inch	1 inch and over
Texture of plies.....	Fine	Medium	Coarse
Number of plies per inch, including friction.....	38-42	26-30	16-20

2. The packing shall withstand boiling in water under 80 pounds steam pressure for four hours without ply separation or material hardening of the rubber.

3. The packing shall not increase in diameter more than 10 per cent when boiled in water in an open dish for two hours.

4. It shall be flexible enough to bend easily around rods as shown in Table 2.

TABLE 2

Size of packing	Diameter of rod
$\frac{1}{4}$ to $\frac{3}{4}$ inch.....	Equal to size of packing.
$\frac{7}{8}$ to $1\frac{1}{8}$ inches.....	Equal to twice the size of packing.
Greater than $1\frac{1}{8}$ inches.....	Equal to three times size of packing.

5. FRICTION.—The rate of separation shall not be greater than 1 inch per minute under a load of 8 pounds per inch of width.

#### IV. DETAIL REQUIREMENTS

1. TYPE B.—The diameter of the rubber core shall be not greater than one-third the diameter of the packing.

2. The rubber core shall contain not less than 75 per cent by volume of the best new wild or plantation rubber. The acetone extract corrected for free sulphur shall not exceed 6 per cent nor shall the total sulphur, exclusive of that contained in barytes, exceed 8 per cent of the weight of the rubber as compounded.

3. The tensile strength of the rubber core shall be not less than 900 pounds per square inch.

4. The ultimate elongation of the rubber core shall be not less than 300 per cent (2 to 8 inches).

#### V. METHOD OF INSPECTION AND TESTS

The inspector shall select one sample 24 inches long for sizes up to  $\frac{1}{2}$  inch, and 12 inches long for sizes over  $\frac{1}{2}$  inch, from each lot of 1,000 pounds or less.

#### VI. MARKING AND PACKING

Material shall be marked and packed as called for in the proposal.

#### VII. ADDITIONAL INFORMATION

No details specified.

VIII. GENERAL SPECIFICATIONS

All tests and analyses shall be made in accordance with the methods described in United States Government General Specifications for Rubber Goods, F. S. B. Specification No. 59a, in effect on date of proposal.

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