

DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS

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UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR
DIAPHRAGM PACKING

FEDERAL SPECIFICATIONS BOARD SPECIFICATION No. 98a

[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 diaphragm packing.

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I. GRADE

Packing shall be furnished in one grade only.

II. MATERIAL AND WORKMANSHIP

Packing shall be manufactured from the best material designated, free from imperfections, and of the dimensions as given.

III. GENERAL REQUIREMENTS

See Section IV.

IV. DETAIL REQUIREMENTS

1. The packing shall be in sheets 36 inches wide and made into rolls of 125 pounds each. It shall be constructed of two layers of cotton fabric, using a layer of rubber between them and a layer of rubber on each side.

2. The outer rubber layers shall be of equal thickness and the rubber layer which separates the plies of fabric shall be $\frac{1}{16}$ inch thick.

3. The thickness of packing shall be $\frac{1}{4}$ or $\frac{3}{8}$ inch as specified, with a tolerance of plus or minus 5 per cent.

4. The fabric shall be square woven duck, and weigh not less than 14 ounces per square yard.

5. The rubber compound shall contain not less than 75 per cent by volume of the best quality 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 rubber as compounded.

6. The tensile strength, elongation, set, and friction of the rubber layers and the breaking strength and count of the fabric shall be as follows:

Rubber layers:

Tensile strength, minimum.....	lbs./in. ² ..	1,200
Ultimate elongation, minimum.....	inches..	2 to 10
Set stretch for 10 minutes.....	do.....	2 to 8
Per cent set after 10 minutes rest, maximum.....		25
Friction, minimum.....	pounds..	14
Fabric, taken from packing—		
Breaking strength, grab method (1 by 1 by 3 inch)—		
Warp, minimum.....	pounds..	150
Filling, minimum.....	do.....	150
Yarns per inch, each warp and filling.....		22 plus or minus 4

V. METHODS OF INSPECTION AND TESTS

A sample of finished packing 12 inches square shall be selected by the inspector from each lot of 1,000 pounds or less and sent to the testing laboratory for tests to determine compliance with the requirements of this specification.

VI. MARKING AND PACKING

Packing 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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