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DEPARTMENT OF COMMERCE  
BUREAU OF STANDARDS  
George K. Burgess, Director

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UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR  
WIRE INSERTION RUBBER PACKING

FEDERAL SPECIFICATIONS BOARD SPECIFICATION No. 112a

[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 Wire insertion rubber packing.

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I. GRADE

Packing shall be furnished in one grade only.

II. MATERIAL AND WORKMANSHIP

The packing shall be made of layers of rubber with brass wire insertion so arranged that both faces of the packing shall be a layer of rubber.

III. GENERAL REQUIREMENTS

See Section IV.

## IV. DETAIL REQUIREMENTS

1. The rubber layers shall contain not less than 60 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 the rubber as compounded.

2. The wire insertion shall be woven from brass wire 0.012 inch in diameter, 24 meshes to the inch.

3. The layer of rubber shall be of the same thickness on both sides of the wire insertion.

4. Packing  $\frac{1}{16}$  and  $\frac{3}{32}$  inch thick shall contain one ply of wire insertion; all other thicknesses shall contain one ply of wire insertion for each  $\frac{1}{16}$  inch of thickness.

5. There shall be a layer of rubber between two layers of insertion.

6. A tolerance in thickness, plus or minus, will be permitted as follows: For thickness  $\frac{3}{32}$  inch or less, 10 per cent; for greater thickness, 5 per cent.

7. The packing shall withstand bending double in any direction without cracking.

8. The packing shall stand exposure to boiling water for four hours without apparent injury or separation of layers.

9. The packing shall stand bending 180° around a rod of diameter equal to its thickness after exposure to steam at 150 lbs./in.<sup>2</sup> gauge for four hours.

10. FRICTION.—The rate of separation shall be not greater than 1 inch per minute under a load of 9 pounds per inch of width.

11. The weights of the finished packing shall conform to Table 1.

TABLE 1

Size of packing (inch)	Weight of packing per square yard	
	Minimum	Maximum
	<i>Pounds</i>	<i>Pounds</i>
$\frac{1}{16}$ .....	7.0	8.5
$\frac{3}{32}$ .....	11.0	12.5
$\frac{1}{8}$ .....	14.0	16.5
$\frac{3}{16}$ .....	20.5	24.5
$\frac{1}{4}$ .....	27.0	32.5

## V. METHOD OF INSPECTION AND TESTS

The inspector shall select a sample containing 1 square foot from each lot of 1,000 pounds or less of finished packing and forward it to the testing laboratory.

**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. 59, in effect on date of proposal.

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