

100, 200, 1925

U. S. Gov't  
Master  
Specification  
No. 220a

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

CIRCULAR OF THE BUREAU OF STANDARDS No. 249

[Issued June 13, 1925]

UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR  
CLOTH-INSERTED HOT-WATER BOTTLE

FEDERAL SPECIFICATIONS BOARD SPECIFICATION No. 220a

[Revised June 1, 1925]

This specification was officially promulgated by the Federal Specifications Board on November 5, 1924, for the use of the Departments and Independent Establishments of the Government in the purchase of cloth-inserted hot-water bottles.

CONTENTS

	Page
I. Type.....	1
II. Material and workmanship.....	1
III. General requirements.....	2
IV. Detail requirements.....	2
1. Capacity and thickness.....	2
2. Fittings.....	2
3. Rubber content.....	2
4. Fabric.....	2
5. Finished sheeting.....	2
6. Resistance to hot water.....	2
7. Inflation.....	2
V. Sampling.....	3
VI. Packing and marking.....	3
VII. Additional information.....	3
VIII. General specifications.....	3

I. TYPE

Bottles shall be oblong in shape with rounded corners. Rubber hot water bottles are considered in Federal Specifications Board specification No. 221a.

II. MATERIAL AND WORKMANSHIP

Bottles shall be made with double-coated rubber sheeting suitably reinforced at seams or edges and throat. All reinforcements and

seams shall be true, neat, and free from defects. The surface of the bottle shall be smooth and free from pits and other imperfections. An embossed surface will not be acceptable.

### III. GENERAL REQUIREMENTS

No details specified.

### IV. DETAIL REQUIREMENTS

1. CAPACITY AND THICKNESS.—The capacity of the bottle shall be 3 quarts. The thickness of the cloth-inserted wall shall be 0.025 inch, with a tolerance of  $\pm 0.005$  inch.

2. FITTINGS.—The throat plug shall be of noncorrosive material, and shall be threaded to give an accurate fit with the stopper. It shall be cemented and securely held in place. The stopper shall be nickel plated, and shall be securely attached to the bottle by means of a strap, chain, or rubber cord. The stopper shall be provided with a rubber washer, which shall produce a water-tight seal. The neck of the bottle shall be provided with a loop handle, which shall be made of rubberized fabric securely held in place. It shall be not less than  $\frac{1}{2}$  inch wide and shall extend at least to the top of the funnel. The bottom of the bottle shall be provided with a rubber tab having a reinforced eye, which shall show no appreciable distortion or displacement when supporting the filled bottle. The top of the funnel shall have a minimum circumference of at least  $7\frac{1}{8}$  inches. The depth shall be at least  $1\frac{1}{4}$  inches.

3. RUBBER CONTENT.—The rubber compound shall contain at least 38 per cent, by weight, of best quality new wild or plantation rubber.

4. FABRIC.—The sheeting shall be a plain weave, evenly woven, and free from imperfections and makeweight. It shall have a thread count of not less than 68 threads to the inch in warp and 70 in filling, and shall weight not less than 4.3 ounces per square yard. It shall have a tensile strength of not less than 60 pounds, warp and filling, determined by the strip method.

5. FINISHED SHEETING.—The tensile strength of the coated sheeting shall be not less than 65 pounds, warp and filling. Tests shall be made within 30 days from date of delivery, by the strip method, on specimens 2 inches wide.

6. RESISTANCE TO HOT WATER.—A sample after being subjected to the action of boiling water for seven days shall be free from blisters or other defects which might affect its serviceability.

7. INFLATION.—The bottle when inflated with air at a pressure of 3 lbs./in.<sup>2</sup> shall show no leakage nor any indication of weakness.

### V. SAMPLING

One bottle shall be selected from each 100 delivered for test and analysis. Manufacturers submitting samples of rubber compound, coated sheeting, or cloth insertion shall guarantee samples to be of the same material and equivalent cure to that to be supplied in articles to be furnished.

### VI. PACKING AND MARKING

Each bottle shall have the manufacturer's name or trade name vulcanized in raised letters. Packing shall be as called for in the proposal.

### VII. ADDITIONAL INFORMATION

No details specified.

### VIII. GENERAL SPECIFICATIONS

General Specifications for Rubber Goods, F. S. B. Specification No. 59a, and for Textiles, in effect on date of issuance of proposal, shall form part of this specification.

---

ADDITIONAL COPIES  
OF THIS PUBLICATION MAY BE PROCURED FROM  
THE SUPERINTENDENT OF DOCUMENTS  
GOVERNMENT PRINTING OFFICE  
WASHINGTON, D. C.  
AT  
5 CENTS PER COPY

▽

