

A UNITED STATES
DEPARTMENT OF
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PUBLICATION



NBS Voluntary Product Standard

PS 50-71

Package Quantities of Toothpaste

A Voluntary Standard
Developed by Producers,
Distributors, and Users
With the Cooperation of the
National Bureau of Standards

U.S.
DEPARTMENT
OF
COMMERCE

National
Bureau
of Standards

UNITED STATES DEPARTMENT OF COMMERCE

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Voluntary Product Standard

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Package Quantities of Toothpaste

Technical Standards Coordinator: C. B. Phucas

Abstract

This Voluntary Product Standard covers the net weights of the package quantities recommended for toothpaste having specific gravities within the range of 1.45 to 1.75. This standard also provides for the package quantities of toothpaste having specific gravities below 1.45 and above 1.75.

Key words: Package quantities of toothpaste; toothpaste, package quantities.

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VOLUNTARY PRODUCT STANDARDS

Voluntary Product Standards are standards developed under procedures established by the Department of Commerce (15 CFR Part 10, as amended, May 28, 1970). The standards may include (1) dimensional requirements for standard sizes and types of various products, (2) technical requirements, and (3) methods of testing, grading, and marking. The objective of a *Voluntary Product Standard* is to establish requirements which are in accordance with the principal demands of the industry and, at the same time, are not contrary to the public interest.

Development of a VOLUNTARY PRODUCT STANDARD

The Office of Engineering Standards Services of the National Bureau of Standards has been assigned by the Department of Commerce the responsibility to work closely with scientific and trade associations and organizations, business firms, testing laboratories, and other appropriate groups to develop *Voluntary Product Standards*. The Bureau has the following role in the development process: It (1) provides editorial assistance in the preparation of the standard; (2) supplies such assistance and review as is required to assure the technical soundness of the standard; (3) acts as an unbiased coordinator in the development of the standard; (4) sees that the standard is representative of the views of producers, distributors, and users or consumers; (5) seeks satisfactory adjustment of valid points of disagreement; (6) determines the compliance with the criteria established in the Department's procedures cited above; and (7) publishes the standard.

Industry customarily (1) initiates and participates in the development of a standard; (2) provides technical counsel on a standard; and (3) promotes the use of, and support for, the standard. (A group interested in developing a *Voluntary Product Standard* may submit a written request to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D.C. 20234.)

A draft of a proposed standard is developed in consultation with interested trade groups. Subsequently, a Standard Review Committee is established to review the proposed standard. The committee, appropriately balanced, includes qualified representatives of producers, distributors, and users or consumers of the product being standardized. When the committee approves a proposal, copies are distributed for industry consideration and acceptance. When the acceptances show general industry agreement, and when there is no substantive objection deemed valid by the Bureau, the Bureau announces approval of the *Voluntary Product Standard* and proceeds with its publication.

Use of a VOLUNTARY PRODUCT STANDARD

The adoption and use of a *Voluntary Product Standard* is completely voluntary. *Voluntary Product Standards* have been used most effectively in conjunction with legal documents such as sales contracts, purchase orders, and building codes. When a standard is made part of such a document, compliance with the standard is enforceable by the purchaser or the seller along with other provisions of the document.

Voluntary Product Standards are useful and helpful to purchasers, manufacturers, and distributors. Purchasers may order products that comply with *Voluntary Product Standards* and determine for themselves that their requirements are met. Manufacturers and distributors may refer to the standards in sales catalogs, advertising, invoices, and labels on their product. Commercial inspection and testing programs may also be employed, together with grade labels and certificates assuring compliance, to promote even greater public confidence. Such assurance of compliance promotes better understanding between purchasers and sellers.

Package Quantities of Toothpaste

Effective April 1, 1971. (See section 4.)

(This Standard, initiated by The Cosmetic, Toiletry, and Fragrance Association, has been developed under the *Procedures for the Development of Voluntary Product Standards*, published by the U.S. Department of Commerce. See Section 5, *History of Project*, for further information.)

1. PURPOSE

The purpose of this Voluntary Product Standard is to establish, as a voluntary industry standard of practice for the packaging, distribution, and use of toothpaste, the labeled quantities of packages which are offered for sale at the retail level. Toothpaste is defined as a paste of the dentifrice type, manufactured and packed for regular retail sale in a tube for the purpose of cleaning human, natural teeth.

2. SCOPE

This Voluntary Product Standard covers the net weights of the package quantities recommended for toothpaste having specific gravities within the range of 1.45 to 1.75. This Standard also provides for the package quantities of toothpaste having specific gravities below 1.45 and above 1.75.

3. REQUIREMENTS

3.1. **Quantities**—Toothpaste offered for retail sale with specific gravities of 1.45 to 1.75 shall be packaged and labeled in terms of avoirdupois ounces as follows:

1.50 3.00 5.00 7.00 9.00

Toothpaste with a specific gravity of less than 1.45 or more than 1.75 shall be packed either in the same net weights as those listed above or on a comparable volume basis in tubes of approximately the same dimensions as those customarily used for toothpaste with specific gravities between 1.45 and 1.75.

3.2. **Specific gravity**—The specific gravity of the toothpaste shall be determined as specified in 3.2.1, 3.2.2, and 3.2.3.

3.2.1. **Apparatus**—The following items, which are considered to be normal laboratory equipment, are required in determining specific gravity:

- (1) Glass cup—175 to 225 milliliter capacity, 2 to 3 inches in diameter, 3 to 3½ inches high, without pouring spout.

- (2) Plate glass cover—Approximately 1 inch in diameter larger than the outside diameter of the cup.
- (3) Balance—Analytical balance with a sensitivity of 0.1 gram under load.

3.2.2. Procedure—

- (1) Weigh the clean, dry cup with cover. This and all subsequent weighing shall be to the nearest 0.1 gram.
- (2) Place the cup on the balance pan and fill it as far as possible with water at room temperature. Add the last few milliliters of water carefully, to avoid spillage. Apply the cover. Wipe excess water from the cover and the sides with filter paper. Weigh the cup, cover, and water. Repeat five times and average the values. (Once the apparatus is calibrated, it need be recalibrated for future tests only infrequently.)
- (3) Empty the cup and dry both it and the cover.
- (4) Carefully extrude the contents of the toothpaste tube (s) into the cup, keeping the tube nozzle slightly below the surface of the paste in the cup during the extrusion, and firmly tapping the cup on the work surface from time to time while extruding the paste to eliminate air pockets.
- (5) Fill the cup to just overflowing. Remove excess paste by pressing the plate down on the surface. Wipe excess paste from around the rim. Weigh the cup and cover plus paste.
- (6) Repeat step 5 two more times using additional toothpaste.
- (7) Determine the average of the measurements made in steps 5 and 6.

3.2.3. Calculation—The specific gravity of the sample shall be calculated from the following formula:

$$\frac{(\text{Average weight of apparatus plus paste}) - (\text{Weight of apparatus})}{(\text{Average weight of apparatus plus water}) - (\text{Weight of apparatus})} = \text{Specific gravity at room temperature}$$

3.3. Package conformance—Only packages of toothpaste labeled in accordance with the limitations established in 3.1 shall be deemed to comply with this Voluntary Product Standard.

3.4. Exceptions—This Voluntary Product Standard shall *not* apply to: (1) promotional packages offered for a limited time, (2) promotional packages containing two or more tubes, each of which complies with the requirements of section 3, (3) test market quantities, (4) packages containing less than 1.25 ounces or more than 10.0 ounces of toothpaste, or (5) therapeutic preparations indicated principally in the treatment and control of hypersensitive dentine, or periodontal conditions, provided that this shall not preclude optional compliance with the requirements of this Standard.

4. EFFECTIVE DATE

The effective date of this Voluntary Product Standard is the date upon which reference to the Standard may be made by packagers, distributors, users and consumers, and other interested parties. Compliance by packagers with all of the requirements of this Voluntary Product Standard may not actually occur until some time after its effective date. Products shall not be represented as conforming to this Voluntary Product Standard until such time as all requirements established in the Standard are met. The effective date of this Standard is April 1, 1971.

5. HISTORY OF PROJECT

In July 1968, The Cosmetic, Toiletry, and Fragrance Association submitted a proposed Standard to the National Bureau of Standards with a request that it be developed in accordance with the *Procedures for the Development of Voluntary Product Standards* of the Department of Commerce. A standard for this product was needed to reduce the number of package quantities of toothpaste found in the marketplace.

The Standard was approved by a Standard Review Committee composed of packagers, distributors, and consumers of the product. Based on the recommendation of the Standard Review Committee, the Standard was then circulated to all known packagers, and to a representative list of distributors and consumers of the product to determine its acceptability. The responses to this circulation indicated a consensus of acceptability as defined in the Voluntary Product Standards procedures.

On December 14, 1970, the Standard, designated PS 50-71, *Package Quantities of Toothpaste*, was approved for publication by the National Bureau of Standards to be effective April 1, 1971.

Technical Standards Coordinator:

Charles B. Phucas, Office of Engineering Standards Services,
National Bureau of Standards, Washington, D.C. 20234

6. STANDING COMMITTEE

The individuals whose names are listed below constitute the membership of the Standing Committee for this Standard. The function of the committee is to review all proposed revisions and amendments in order to keep this Standard up to date. Comments concerning this Standard and suggestions for its revision may be addressed to any member of the committee or to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D.C. 20234, which acts as secretary for the committee.

Representing Packagers

Lee Bloom (Chairman), Vice President, Lever Brothers Company,
390 Park Avenue, New York, New York 10022

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Lawrence Weisberg, Iodent Chemical Company, 2233 Park Avenue, Detroit, Michigan 48201

Representing Distributors

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Donald Elliott, H & BA Merchandiser, Kroger Company, 1014 Vine Street, Cincinnati, Ohio 45201
William Goodwin, Vice President and General Merchandise Manager, Eckerd Drugs, Inc., 1111 Hawthorne Lane, P.O. Box 943, Charlotte, North Carolina 28201
John James, Manager, Drug Mark Division, 1200 East 5th Avenue, Columbus, Ohio 43216
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Representing General Interest

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Matt Jennings, Director, Division of Marketing, State Department of Agriculture, Melrose Station, Box 9039, Nashville, Tennessee 37240

7. ACCEPTORS

The packagers, distributors, consumers and others listed below have individually indicated in writing their acceptance of this Voluntary Product Standard prior to its publication. The acceptors have indicated their intention to use this Standard as far as practicable but reserve the right to depart from it when necessary. The

list is published to show the extent of recorded public support for this Standard.

ASSOCIATIONS

Cosmetic, Toiletry, and Fragrance Association,
The, Washington, D.C.

PACKAGERS

American Home Products Corporation, New York, New York
Beecham, Inc., Clifton, New Jersey
Colgate-Palmolive Company, New York, New York
Lever Brothers Company, New York, New York
Procter and Gamble Company, The, Cincinnati, Ohio
Rystan Company, Inc., Mount Vernon, New York
Sheffield Company, The, New York, New York
Watkins Products, Inc., Winona, Minnesota

DISTRIBUTORS

Acme Markets, Inc., Philadelphia, Pennsylvania
Avellone Pharmacy, Inc., Bay Village, Ohio
Begley Drug Company, Richmond, Kentucky
Birite Drug, Rawlins, Wyoming
Daylin, Inc., Long Beach, California
Great Atlantic & Pacific Tea Company, Inc., The, New York, New York
Hook Drugs, Inc., Indianapolis, Indiana
Humpty Dumpty Super Markets, Oklahoma City, Oklahoma
Katz Drug Company, Inc., Kansas City, Missouri
Kauffman-Lattimer Company, The, Columbus, Ohio
Kroger Company, The, Cincinnati, Ohio
Lane Drug Company, Toledo, Ohio
Macy, R. H., Company, Inc., New York, New York
Purity Supreme Supermarkets, Inc., North Billerica, Massachusetts
Schlegel Drug Stores, Davenport, Iowa
Skaggs Drug Centers, Inc., Salt Lake City, Utah
Western Wholesale Company, Portland, Oregon
White Cross Stores, Inc., Monroeville, Pennsylvania
Woods, H. A., Drug Company, Inc., Evansville, Indiana

CONSUMERS AND USERS

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Worth, Sara P., Mt. Holly, New Jersey
Wren, Georgia Lee, Fresno, California

FEDERAL AND STATE GOVERNMENTS

Bureau of Procurement, General Services, Washington, D.C.
Bureau of Standards, Commonwealth of Pennsylvania, Harrisburg, Pennsylvania
Federal Supply Service, General Service Administration, Washington, D.C.
Office of Plant and Operations, U.S. Department of Agriculture, Washington, D.C.
Office of Procurement and Materiel Management, U.S. Department of Health, Education, and Welfare, Rockville, Maryland
Purchase Standards Unit, National Institutes of Health, Bethesda, Maryland