DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OFFICE OF STANDARDS SERVICES

PRODUCT STANDARD PS24-70
MELAMINE DINNERWARE
(ALPHA-CELLULOSE-FILLED FOR HOUSEHOLD USE)

Product Standard PS24-70, Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use, was withdrawn by the U.S. Department of Commerce on January 20, 1982.

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The following standards may be used: NS 36 - Dinnerware; ASTM D704, Standard Specification for Melamine-Formaldehyde Molding Compounds and Federal Specification A-A-2870, Tableware, Plastic.

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A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

NBS Voluntary Product Standard

WITHDRAWN

PS 24-70

Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use

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

For sale by the Superintendent of Documents
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U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards

Product Standard PS 24-70
Supersedes Commercial Standard CS 210-57

Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use

Effective April 1, 1970 (See section 6)

(This voluntary Standard, initiated by The Society of the Plastics Industry, Inc., has been developed under the *Procedures for the Development of Voluntary Product Standards*, published by the Department of Commerce. See Section 7, *History of Project*, for further information.)

1. PURPOSE

The purpose of this Product Standard is to establish quality requirements for melamine plastic dinnerware, alpha-cellulose-filled, for household use, and to provide a nationally recognized standard for the information and use of producers, distributors, and users.

2. SCOPE

2.1. This Product Standard covers the properties, the methods of test, and the thickness and weight of household dinnerware molded from alpha-cellulose-filled melamine-formaldehyde and other amino-triazine-formaldehyde plastic materials.[1] Requirements for the finish and decorations are also covered by the Standard. Methods for identifying melamine dinnerware complying with the requirements of this Standard are provided.

2.2. This Standard does not cover the design or color of melamine dinnerware.

3. REQUIREMENTS

3.1. Materials—The dinnerware shall be molded from alpha-cellulose-filled melamine-formaldehyde and other amino-triazine-formaldehyde resins.

3.2. Weight and thickness—Dinnerware shall meet either the minimum weights or the minimum thicknesses specified in table 1 for the respective diameters. (See 4.5.1.) The dinnerware may be furnished under either requirement as agreed upon by the buyer and seller.

[1] Tableware for heavy-duty use is covered by Product Standard PS 25-70, *Heavy-Duty Alpha-Cellulose-Filled Melamine Tableware.*

3.2.1. Weight—When minimum weight is specified, no part of the plate, saucer, or cup shall have a thickness less than 70 percent of the corresponding value specified in table 1. The minimum edge radius shall be in accordance with the requirements of column A, table 1. The weight shall be determined in accordance with 4.5.2.

3.2.2. Thickness—When minimum thickness is specified, the plate, saucer, or cup shall maintain the corresponding thickness in table 1 up to 3/16 inch from the center of the edge radius. No part of this 3/16-inch area may be less than 0.010 inch under the specified

that the requirements of this Standard are met with a high degree of assurance. This requirement does not preclude additional sampling and testing that may be agreed upon between the parties concerned to verify the validity of the claim.

4.3. **Sampling**—Three specimens shall be chosen at random from each lot of the same shape and size and tested to determine conformance of the dinnerware with each of the requirements of section 3. If more than one of the original three specimens for a given test fails, the dinnerware shall be reported as failing to conform with this Product Standard. If one of the three specimens fails to meet the requirements of a given test, three additional specimens shall be subjected to that test, all of which shall be required to pass the test in order to indicate conformance of the dinnerware with this Product Standard.

4.4. **Visual inspection**—The specimens shall be visually inspected to determine their conformance with the requirements of 3.3.

4.5. **Test procedures**

4.5.1. **Diameter**—The diameter of the dinnerware shall be determined by measuring a finished piece of the ware to the nearest 1/32 inch, using a caliper and a machinists steel scale.

4.5.2. **Weight**—The weight shall be determined to the nearest gram, using a balance sensitive to 0.1 gram.

4.5.3. **Thickness**—The thickness of the tableware shall be determined to the nearest 0.001 inch, using a screw thread comparator micrometer.

4.5.4. **Sulfuric acid test**

4.5.4.1. **Materials**

(a) An aqueous solution of sulfuric acid, 0.8 percent by weight should be used. This solution can be obtained from a local drug or chemical supply house.

(b) A porcelain-enameled or stainless-steel pail, with cover, of about 2- to 3-quart capacity should be used. Enameled ware must not be used if the inside surface is chipped, exposing bare metal.

(c) Heater, preferably a gas burner, of about 4 to 5 inches in diameter should be used. The heater should have sufficient capacity to keep the acid solution boiling fairly vigorously.

(d) Boiling stones of acid-resistant glass or ceramic material should be added to prevent superheating of the acid solution.

4.5.4.2. **Procedure**

(a) Three specimens which have not been subjected to the tests in 4.5.5 or 4.5.6 shall be used for this test. If a plate, dish, or saucer is being tested, cut a 3-inch-wide cross-sectional test piece from the specimens. If a cup is being tested, cut a section from about one-half of the specimens (taking for the test that part which includes the handle). The entire piece of dinnerware may be used if it is desired not to destroy it by cutting.

(b) Heat to boiling a fresh portion of acid solution, keeping the container covered. Immerse the test

lished in Product Standard PS 24-70, developed cooperatively with the industry and published by the National Bureau of Standards under the Voluntary Product Standards procedures of the U.S. Department of Commerce. Full responsibility for the conformance of this product with the standard is assumed by (name and address of producer or distributor).

The following abbreviated statement is suggested when available space on labels is in sufficient for the full statement:

Conforms to PS 24-70, (name and address of producer or distributor).

6. EFFECTIVE DATE

The effective date of a Voluntary Product Standard is the date upon which reference to the Standard may be made by producers, distributors, users and consumers, and other interested parties. Compliance by producers with the requirements of a Product Standard may not actually occur until some time after the effective date. Products shall not be labeled or otherwise described as conforming to a Product Standard until such time as all applicable requirements established in the Standard are met. The effective date of this Standard is April 1, 1970.

7. HISTORY OF PROJECT

In a letter dated June , 1956, the Melamine Dinnerware Division of The Society of the Plastics Industry, Inc., requested the assistance of the Department of Commerce in establishing a Commercial Standard for melamine dinnerware (alpha-cellulose-filled) for household use.

This recommended Commercial Standard was circulated to the industry on November 15, 1956, for consideration and acceptance. Sufficient acceptances were received to assure success of the Standard, and CS 210-57 became effective on April 1, 1957.

Current Revision

On February 21, 1966, the Melamine Dinnerware Guild of The Society of the Plastics Industry, Inc., requested the assistance of the Department of Commerce in the revision of Commercial Standard CS 210-57, *Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use*, to update the Standard and to reflect advancements in technology which had occurred since the Standard was published in 1957. The principal changes were that the requirements for the thickness and weight of the dinnerware were clarified, the paragraph concerning decorations was made more definitive, and a test for determining the molding quality of the dinnerware was established.

The proposed revision was reviewed by the Office of Engineering Standards Services, the Melamine Dinnerware Guild, and the Standing Committee. Adjustments were made to the satisfaction of all groups involved, and the recommended Product Standard, TS 107a, *Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use*, was circulated to the trade for acceptance on November 8, 1968.

The response to the November 1968 circulation indicated a con-

individually indicated in writing their acceptance of this Product Standard prior to its publication. The acceptors have indicated their intention to use the 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 the Standard.

ASSOCIATIONS
(General Support)

American Hotel & Motel Association, New York, New York

Society of the Plastics Industry, Inc., The, New York, New York

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Lapcor Plastics, Inc., Manitowoc, Wisconsin

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Maple Leaf Plastics Ltd., Scarborough, Ontario

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Plastics Manufacturing Company, Dallas, Texas

Prolon Dinnerware Division of Vistron Corporation, Cleveland, Ohio

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California Testing Laboratories, Inc., Los Angeles, California

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