

U-T-30C  
 September 24, 1975  
 SUPERSEDING  
 U-T-0030B (GSA-FSS)  
 February 24, 1967, and  
 U-T-30A  
 August 4, 1966

FEDERAL SPECIFICATION

TALCUM POWDER

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE

1.1 Scope. This specification covers one type of talcum powder (see 6.1).

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

PPP-B-566 - Boxes, Folding Fiberboard.  
 PPP-B-636 - Boxes, Shipping, Fiberboard.  
 PPP-B-676 - Boxes, Setup.

Federal Standard:

Fed. Std. No. 123 - Marking for Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.  
 MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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Laws and Regulations

21 CFR 1 - Federal Food, Drug, and Cosmetic Act.

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

U.S. Pharmacopeial Convention, Inc.:

Pharmacopoeia of the United States (U.S.P.).

(Application for copies should be addressed to the Mack Publishing Company, Easton, PA 18042.)

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent.

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

## 3. REQUIREMENTS

3.1 Finished product. Talcum powder shall consist of finely powdered talc (native magnesium silicate). A mild perfume is permitted. The product shall have the physical and chemical requirements specified in table I. When rubbed between the thumb and fingers, the finished product shall feel soft, smooth, slippery, and nonabrasive, there shall be no evidence of grit.

TABLE I. Physical and chemical requirements

Characteristic	Minimum	Maximum
pH	(neutral to litmus paper)	
Loss on ignition (percent)	--	9.0
Water soluble substances (percent)	--	0.3
Weight percent retained on.		
No. 100 US Standard Sieve	--	1.0
No. 200 US Standard Sieve	--	3.0

3.2 Excluded material. The talcum powder shall not contain boric acid or borates.

3.3 Color. The color of the talcum powder shall be white, unless otherwise specified by the contract.

3.4 Odor. The talcum powder shall be odorless or mildly fragrant.

3.5 Federal Food, Drug, and Cosmetic Act. The individual components and the finished product shall conform to the requirements of the Federal Food, Drug, and Cosmetic Act and Regulations promulgated thereunder.

3.6 Workmanship The finished product shall be a clean, uniform, and free flowing powder.

3.7 Certificate of compliance The manufacturer shall certify that the finished product meets the requirements of 3.2 and 3.5.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.1.1 Certificate of compliance. Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

#### 4.2 Quality conformance inspection.

4.2.1 Inspection of the end item. In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, or qualified in this specification or applicable purchase documents.

4.2.2 Examination of preparation for delivery. Packaging, packing, and marking shall be examined to determine compliance with the requirements of section 5. Defects shall be scored in accordance with table II. Sampling and acceptance shall be in accordance with MIL-STD-105, inspection level S-2, acceptable quality level (AQL) of 4.0 percent defective. The sample unit shall be one shipping container fully prepared for delivery. The lot size shall be the number of shipping containers presented for delivery at one time.

TABLE II. Examination of preparation for delivery

Examine	Defect
Contents	Not as specified.
Containers	Not as specified.
Markings	Omitted; incorrect; illegible, improper size, location, sequence or method of application.
Materials	Component missing or damaged.
Workmanship	Bulging or distortion of containers. Cushioning inadequate, improper or missing.

4.2.2.1 Examination of closure, waterproofing, and banding. When shipping containers are required to comply with PPP-B-636, examination for defects in closure, waterproofing, and banding shall be in accordance with the appendix of that specification.

4.2.3 Examination of the end item. The end item shall be examined for defects in accordance with table III. Sampling and acceptance shall be in accordance with MIL-STD-105, inspection level S-1, AQL of 4.0 percent defective. The sample unit shall be one unit container (see 5.1). The lot shall consist of all talcum powder manufactured in one 24 hour period or part thereof under the same processing conditions using the same raw material lots, and offered for delivery at the same time.

TABLE III. Examination of the end item

Examine	Defect
Net weight	Not as specified (see 5.1).
Contents:	
Feel	Gritty, not slippery.
Color	Not white or not as specified in contract.
Odor	Objectionable, not mildly fragrant or odorless.
Workmanship	Not clean, not uniform powder.

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4.2.4 Testing of the end item. The end item shall be tested in accordance with table IV. Sampling shall be in accordance with MIL-STD-105, inspection level S-1. The sample unit shall be one unit container. The lot shall consist of all talcum powder manufactured in one 24 hour period or part thereof under the same processing conditions, from the same raw material lots, and offered for delivery at one time. Take 100 g of talcum powder from each unit container chosen and mix together thoroughly to form a composite sample. Failure of the composite sample to pass any of the tests shall be cause for rejection of the lot. In case of failure, report numerical point of failure or description of failure, as applicable.

TABLE IV. Instruction for testing the end item

Characteristic	Specification reference		Results reported	
	Requirement	Test Method	pass or fail	numerically to nearest
Talc identification	3.1	4.3.1	X	
Loss on ignition	Table I	4.3.2		0.1 percent
Water soluble substances	Table I	4.3.3		0.01 percent
pH	Table I	4.3.3	X	
Fineness	Table I	4.3.4	X	

#### 4.3 Test methods.

4.3.1 Talc identification. Mix 500 mg of sample with about 200 mg of anhydrous sodium carbonate and 2 g of anhydrous potassium carbonate, and heat the mixture in a platinum crucible until fusion is complete. Cool, and transfer the fused mixture to a dish or beaker with the aid of about 50 ml of hot water. Add hydrochloric acid to the liquid until effervescence ceases, than add 10 ml more of the acid, and evaporate the mixture on a steam bath to dryness. Cool, add 20 ml of water, boil, and filter the mixture an insoluble residue of silica shall remain. Dissolve in the filtrate about 2 g of ammonium chloride, and add 5 ml of 10 percent ammonia solution. Filter if necessary, and add 1N sodium phosphate solution to filtrate a white crystalline precipitate of magnesium ammonium phosphate shall separate.

Alternatively, the sample may be identified by comparing its x-ray diffraction patterns with that of a known sample of U.S.P. talc.

4.3.2 Loss on ignition. Weigh approximately 1 g of the sample to the nearest mg in a tared platinum crucible provided with a cover. Heat gradually, then ignite at red heat to constant weight. Calculate the percent of the original weight lost on heating. Make two determinations and report the average.

4.3.3 Water soluble substances and pH. Weigh approximately 10 g of the sample to the nearest mg. Boil in 50 ml of distilled water for 30 minutes, adding distilled water from time to time to maintain approximately the original volume. Filter through quantitative filter paper. Apply a few drops of the filtrate to litmus paper with a glass rod. The filtrate shall be neutral to litmus paper. Evaporate the filtrate to dryness in a tared beaker and dry at 105° C for 1 hour. Using the weight of the residue, calculate the weight percent of water soluble substances in the original sample.

4.3.4 Fineness. Dry a No. 200 sieve and a No. 100 sieve in an oven at 105° to 110°C. Cool the sieves and weigh. Moisten 30 g of the talcum powder with alcohol and then add 100 ml of water. Wash this mixture through the No. 100 sieve onto and through the No. 200 sieve using a gentle stream of water and stirring gently with a camel's hair brush until no more of the talcum powder passes through the sieve. Detach the No. 100 sieve and wash the talcum powder through the No. 200 sieve as above. Dry the sieves at 105° to 110°C for 1 hour, cool, and weigh. Based on the increase in the weight of each sieve and the weight of the sample, calculate the percent of talcum powder retained on each sieve

4.3.5 Boric acid. Boric acid may be tested for by the following qualitative test:

4.3.5.1 Turmeric paper. If turmeric paper is not available, it may be prepared as follows. Add 100 ml of 80 percent alcohol to 1.5 - 2.0 g turmeric powder in 250 ml glass Erlenmeyer. Shake 5 minutes and filter. Dip sheets of Whatman No. 2 filter paper into the clear filtrate in a flat-bottomed dish (petri dish). Hang paper to dry. After 1 hour, cut into strips and store in tightly stoppered container protected from light.

4.3.5.2 Qualitative test. Add about 4 g of talcum powder to 100 ml distilled water in beaker. Heat with stirring to boiling and allow to cool. Add 3 ml 0.5 N HCl. Immerse strip of turmeric paper into acidified liquid, and let paper dry spontaneously. If borates or boric acid present, paper turns characteristic red, changed by ammonium hydroxide to dark blue-green, but restored by acid.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A, B, or C, as specified (see 6.2).

### 5.1.1 Levels A and B.

5.1.1.1 Unit container. Not less than 9 ounces nor more than 10.3 ounces of talcum powder shall be packaged in a metal or plastic container with a sifter top cover. The container shall be closed to prevent sifting of the product.

5.1.1.2 Intermediate container. Four, six, eight, or twelve unit containers shall be intermediately packaged in a box conforming to PPP-B-566 or PPP-B-676 or in a full height tray of E-flute fiberboard specified in PPP-B-566.

5.1.2 Level C. The talcum powder shall be packaged to afford adequate protection against damage during shipment from the supply source to the first receiving agency.

5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.2).

5.2.1 Level A. Forty-eight (48) unit containers, intermediately packaged as specified in 5.1.1.2, shall be packed in a box conforming to PPP-B-636, class weather resistant. The box shall be closed, waterproofed, and banded in accordance with appendix to that specification.

5.2.2 Level B. Forty-eight (48) unit containers, intermediately packaged as specified in 5.1.1.2, shall be packed in a box conforming to PPP-B-636, class domestic. The box shall be closed in accordance with the appendix of the box specification.

5.2.3 Level C. The unit containers shall be packed to assure carrier acceptance and safe arrival at destination. Containers shall comply with the National Motor Freight Classification or Uniform Freight Classification, as applicable.

### 5.3 Marking.

5.3.1 Unit and intermediate containers. The unit containers and intermediate containers shall be marked with the name or tradename of contents, the name or trademark of the manufacturer, and the net weight of the contents. Marking shall be with the regular commercial materials and methods.

5.3.2 Shipping containers. The shipping containers (see 5.2) shall be marked in accordance with Fed. Std. No. 123 for civil agencies or MIL-STD-129 for military agencies, as applicable.

## 6. NOTES

6.1 Intended use. The talcum powder covered by this specification is intended for general comfort use.

6.2 Ordering data. Purchasers should select the preferred options permitted herein, and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Quantity required (see 5.1).

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- (c) Color required (see 3.3).
- (d) Levels of packaging and packing required (see 5.1 and 5.2).
- (e) Marking document required (see 5.3).

The Department of Defense has waived coordination of this specification until further notice.

MILITARY INTEREST:

Civil Agency Coordinating Activities:

User activities:

Army - GL  
Marine Corps. - MC

CPSC  
HEW - NIH, FDA  
GSA - FSS

Preparing activity: GSA - FSS

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Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See Section 2 of this specification to obtain copies and other documents referenced herein. Price 30 cents each.