

MIL-S-37489  
9 September 1976

## MILITARY SPECIFICATION

### SODA LIME, USP

This specification is approved for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification covers Soda Lime, USP.

1.2 Classification. The soda lime covered by this specification shall be of the following sizes (See 6.2):

Size 1 - 2-1/2 lb (1.13 kg)

Size 2 - 5 lb (2.27 kg)

#### 2. APPLICABLE DOCUMENTS

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

#### SPECIFICATIONS

##### FEDERAL

PPP-B-566	- Boxes, Folding, Paperboard.
PPP-B-636	- Boxes, Shipping, Fiberboard.
PPP-B-676	- Boxes, Setup.
PPP-C-186	- Containers, Packaging and Packing for Drugs, Chemicals and Pharmaceuticals. (See 6.3)

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Hq, Defense Personnel Support Center, ATTN: Directorate of Medical Materiel, DPSC-ATT, 2800 South 20th Street, Philadelphia, PA 19101, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document, or by letter.

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STANDARDS

MILITARY

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

(Copies of specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,  
FOOD AND DRUG ADMINISTRATION

Federal Food, Drug, and Cosmetic Act and Regulations  
Promulgated Thereunder.

(Application for copies should be addressed to the Food and Drug Administration, Washington, DC 20204.)

U. S. PHARMACOPEIAL CONVENTION, INC.

The United States Pharmacopeia.

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

The National Formulary.

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

3. REQUIREMENTS

3.1 Material. Shall be Soda Lime, and shall be in accordance with the tests, standards, and requirements of the USP, including any supplements or revisions thereto, except that the moisture content shall be not less than 15 percent and not more than 18 percent.

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3.2 Granular size. Shall be between 4 and 8 mesh.

3.3 Indicator. Shall contain a suitable indicator having no chemical action on anesthesia gas, but which shall indicate the absorbent capacity of the soda lime by a distinct and reliable color change. As the carbon dioxide absorptive capacity of the material is gradually exhausted, it shall become increasingly more colored.

3.4 Other ingredients. All other ingredients used in the manufacture of the product shall be of USP or NF quality, or if not included in either or these compendia, shall be suitable for use in this product.

3.5 Expiration dating period. The expiration dating period for size 1 shall be not less than 24 months, and the expiration dating period for size 2 shall be not less than 36 months.

3.5.1 Delivery. For size 1 and size 2, not more than 3 months of the expiration dating period shall have elapsed at the time of delivery to the Government.

3.6 Workmanship. The material and its containers shall be free from defects which detract from their appearance or may impair their serviceability.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Supplier 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 supplies and services conform to prescribed requirements.

4.1.1 Records of examinations and tests performed by or for the contractor shall be maintained by the contractor and made available to the Government, upon the Government's request, at any time, or from time to time, during the performance of the contract and, (i) as to any expiration dated item, for the expiration dating period specified by the contractor for such item, or such longer period as may be required by regulation of any federal agency; or (ii) as to non-dated items, for not less than 3 years after delivery of the item to the Government.

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4.1.2 No company supplying any ingredient(s) to the contractor will be considered an acceptable facility for the performance of any inspection requirements specified herein.

4.2 Lot. For purposes of this specification, a lot, batch, or control is that single, uniform, and homogeneous quantity of product produced from one formulation, subjected to the same compounding and manufacturing operation, and filled into final containers.

4.3 Sampling. Sampling shall be conducted in accordance with MIL-STD-105.

TABLE I. Sampling.

For visual examination	Inspection level	AQL (percent defective)	Unit of product
Major	S-2	1.0	Filled immediate container
Minor	II	2.5	Filled immediate container

4.3.1 For raw material and end item testing. Noncompliance with any of the following is cause for rejection.

TABLE II. For raw material and end item testing.

Characteristic	Requirement paragraph	Inspection level 1/	Minimum sample
Moisture content	3.1	S-2	5 } Composite
Granular size	3.2	S-2	
Indicator	3.3	S-2	

1/ Where possible, the sample shall be used for two or more tests.

4.4 Examination. the finished product shall be examined to determine compliance with all requirements of this specification. Nonconformance will be permitted to the extent indicated in 4.3 and 4.3.1.

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4.4.1 Classification of defects. Examination will be conducted in accordance with the following classification of defects:

TABLE III. Classification of defects.

Categories	Defects <u>1/</u>
Major	
101	Material not free from foreign matter.
102	Material has crystal formation.
103	Material not homogeneous.
Minor	
201	Exterior of immediate container is not free from contents or foreign matter.
202	Label not free from defacing marks and tears.

1/ Inspection is not restricted to the classified possible defects listed above.

4.5 Tests. Tests and examinations shall be performed to determine compliance with all requirements of this document and all referenced documents.

4.6 Packaging inspection. The inspection of the intermediate package, packing and marking for shipment and storage shall be in accordance with quality assurance provisions of the applicable container specification and the marking requirements of MIL-STD-129.

4.7 Labeling inspection. Sampling shall be in accordance with MIL-STD-105 and the unit of product shall be the unit of issue. The inspection lot shall be the number of units of issue of each batch, lot, control number, etc., offered for inspection at one time. The inspection level for labeling shall be S-2 and the acceptance number shall be zero.

## 5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with all applicable requirements of PPP-C-186 (See 6.3) and as specified herein.

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5.2 Packaging. Packaging shall be level A or C, as specified (See 6.1).

5.2.1 Unit of issue. One cartridge (size 1) containing 2-1/2 lb of soda lime or one bottle (size 2) containing 5 lb of soda lime, as specified, constitutes one unit of issue.

5.2.2 Level A.

5.2.2.1 Immediate container.

5.2.2.1.1 Size 1. The immediate container for size 1 shall be a commercially available cartridge-type immediate container considered acceptable by the Food and Drug Administration (FDA) for the product contained therein and shall be of such compatibility that neither the contents nor the container are altered in any way by each other. The immediate container shall be of suitable size and design for use with an oxygen breathing apparatus canister (see 6.4).

5.2.2.1.2 Size 2. The immediate container for size 2 shall be a commercially available immediate container considered acceptable by the Food and Drug Administration (FDA) for the product contained therein and shall be of such compatibility that neither the contents nor the container are altered in any way by each other.

5.2.2.3 Unit package.

5.2.2.3.1 Size 1. Each size 1 cartridge shall be shrink wrapped and sealed in plastic film.

5.2.2.3.2 Size 2. Each size 2 bottle shall be packaged in a box conforming to PPP-B-636, class domestic. Closure shall be as specified in the appendix of the box specification.

5.2.3 Level C. Units shall be packaged in standard commercial containers of the size and kind commonly used, which will afford the degree of protection required for shipment and use of the product for its intended purpose.

5.3 Packing. Packing shall be level A, B or C, as specified (see 6.1).

5.3.1 Level A. Twelve unit packages containing size 1 cartridges or six unit packages containing size 2 bottles shall be packaged in an exterior container designed for a type 2 load and conforming to PPP-B-636, class weather-resistant. Closure, strapping and waterproofing shall be as specified in the appendix of PPP-B-636.

5.3.2 Level B. Twelve unit packages containing size 1 cartridges or six unit packages containing size 2 bottles shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-636 class domestic. Closure shall be as specified in the appendix of the box specification.

5.3.3 Level C. The subject commodity shall be packed in substantial commercial containers of the type, size, and kind commonly used for the purpose, so constructed as to insure acceptance and safe delivery by common or other carriers, at the lowest rate, to point of delivery called for in the contract or purchase order.

5.4 Marking.

5.4.1 Labeling. Labeling shall be in accordance with the requirements of the Federal Food, Drug and Cosmetic Act and shall include the information required below:

5.4.1.1 Immediate container. Each immediate container label for size 1 and size 2 shall bear the following information:

- (a) label information in accordance with commercial practice,
- (b) the expiration date,

5.4.1.2 Unit package. Each unit package label for size 1 and size 2 shall bear the following information:

- (a) label information in accordance with commercial practice.
- (b) the National Stock Number,

NOTES: (1) The National Stock Number shall not be preceded by any prefix,  
(2) Strip labeling may be used.  
(3) Label adhesion test **shall** not apply.

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5.4.2 Exterior container. Each exterior container shall be marked in accordance with MIL-STD-129. The lot (control) number shall be shown. Type I shelf life marking as specified in MIL-STD-129 shall also be shown.

## 6. NOTES

6.1 Ordering data. Procurement documents should specify the following:

- (a) Number and date of this specification.
- (b) National Stock Number.
- (c) Selection of applicable levels of packaging and packing (See 5.2 and 5.3).

6.2 This specification covers the following item(s):

<u>National Stock Number</u>	<u>Item Identification</u>	<u>Specification Designation</u>
6505-00-153-8515	SODA LIME, USP, 5 lb (2.27 kg)	Size 2
6505-00-782-6484	SODA LIME, USP, 2-1/2 lb (1.13 kg)	Size 1

6.3 All references to PPP-C-186 refer to Interim Federal Specification PPP-C-00186B which is mandatory for use until superseded by a revision.

6.4 The immediate container for size 1 shall be suitable for use with 4240-933-5125 CANISTER, OXYGEN BREATHING APPARATUS, which is Ohio Chemical and Surgical Equipment Company's Part No. 219-1567-800.

Custodians:  
 Army - MD  
 Navy - MS  
 Air Force - 03

Preparing activity:  
 Defense Supply Agency - DM  
 Project No. 6505-1654



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