

P-S-683b

December 28, 1965

SUPERSEDING

Int. Fed. Spec. P-S-00683a (Army-GL)

December 15, 1964 and

Fed. Spec. P-S-683

April 20, 1956

FEDERAL SPECIFICATION**SOUR, LAUNDRY (FLUORIDATED)**

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

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers two types and one grade of laundry sours suitable for use in washing formulas (see 6.1).

1.2 Classification.

1.2.1 *Types.* The laundry sour covered by this specification shall be of one grade and of the following types (see 6.2):

Type I—Dry (powder, crystal, or flake).

Type II—Dry concentrate (flake).

2. APPLICABLE SPECIFICATIONS, STANDARDS, AND OTHER PUBLICATIONS

2.1 Specifications and standards. The following specifications and standards of the issue in effect on date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein.

Federal Specifications:

L-P-378—Plastic Film (Polyethylene Thin Gage).

PPP-D-723—Drums, Fiber.

Federal Standards:

Fed. Std. No. 102—Preservation, Packaging, and Packing Levels.

Fed. Std. No. 123—Marking for Domestic Shipment (Civilian Agencies).

Fed. Test Method Std. No. 536—Soap and Soap-Products (Including Synthetic Detergents); Sampling and Testing.

(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, D.C. 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D.C., Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, Los Angeles, and Seattle, Wash.

(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 contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publication. The following document forms a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date

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of invitation for bids or request for proposal shall apply:

Federal Hazardous Substances Labeling Act

(Application for copies should be addressed to the U.S. Department of Health, Education, and Welfare, Food and Drug Administration, Washington, D.C., 20203.)

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

3. REQUIREMENTS

3.1 Composition. The laundry sour shall conform to the requirements specified in table I when tested as specified in 4.3.2.

TABLE I. Composition

	Percent by weight			
	Type I		Type II	
	Minimum	Maximum	Minimum	Maximum
Sodium silicofluoride (Na_2SiF_6)	44.0	—	—	—
Sodium acid fluoride (NaHF_2)	44.0	—	—	—
Sum of Na_2SiF_6 and NaHF_2	95.0	—	—	—
Oxalic acid	* 0	—	—	—
Matter insoluble in water	—	3.0	—	* 0
Laundry sour retained on a No. 80 sieve	—	15.0	—	—
Ammonium bifluoride (NH_4HF_2)	—	—	97.0	—
Ammonium fluoride (NH_4F)	—	—	—	2.0
Hydrofluoric acid (HF)	—	—	—	0.5

* Negative test.

3.2 Labeling. The labeling shall comply with the provisions of the Federal Hazardous Substances Labeling Act. Each unit container shall be clearly and legibly marked (as applicable).

3.2.1 Type I.

SOUR, LAUNDRY (FLUORIDATED)

Dry, Type I, Specification P-S-683
50 lb. (or 100 lb., as applicable)
Stock Number

DIRECTIONS FOR USE

Add the laundry sour (about 1-1/2 ounces per 100 pounds of washload) to washer as cylinder revolves. Determine the exact amount required by using the washroom control kit. Use sufficient sour to obtain pH readings as follows:

Washing Classification	pH reading
White apparel requiring starch	4.5 to 5.0
All colored wearing apparel and white apparel not requiring starch	5.0 to 5.5
Flatwork	6.0 to 6.5

WARNING: CONTAINS SODIUM ACID FLUORIDE AND SODIUM SILICOFUORIDE AND MAY BE FATAL IF SWALLOWED CAUSES SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE WEAR PROTECTIVE CLOTHING TO AVOID DUST INHALATION AND SKIN CONTACT HANDLE WITH CARE REMOVE ANY SPILLAGE MANUFACTURER'S NAME CONTRACT NUMBER DATE

3.2.2 Type II.

SOUR, LAUNDRY (FLUORIDATED)

Dry Concentrate, Type II,
Specification P-S-683
50 lb. (or 100 lb., as applicable)
Stock Number

DIRECTIONS FOR USE

Prepare a concentrated solution (1 pound of type II laundry sour per gallon of water) in a polyethylene container. Determine, by using a washroom control kit, the amount of concentrated solution to be used to obtain pH readings as follows:

<i>Washing Classification</i>	<i>pH reading</i>
White apparel requiring starch	4.5 to 5.0
All colored wearing apparel and white apparel not requiring starch	5.0 to 5.5
Flatwork	6.0 to 6.5

WARNING: CONTAINS AMMONIUM ACID FLUORIDE AND MAY BE FATAL IF SWALLOWED CAUSES SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE WEAR PROTECTIVE CLOTHING TO AVOID DUST INHALATION AND SKIN CONTACT HANDLE WITH CARE REMOVE ANY SPILLAGE MANUFACTURER'S NAME CONTRACT NUMBER DATE

3.3 Workmanship. Type I of the finished product shall be clean, free of foreign matter, homogeneous with no "lumping" in the container; type II shall be the same but might require moderate hand pressure to aid its free flow.

4. SAMPLING, INSPECTION, AND TEST PROCEDURES

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, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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.

4.2 Inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

4.2.1 Component and material inspection.

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

4.3 Inspection of the end item.

4.3.1 Examination of the end item. The end item shall be examined for the defects in the applicable subparagraphs at the inspection levels and acceptable quality levels (AQLs) set forth in 4.3.1.4. The lot size, for purposes of determining the sample size in accordance with MIL-STD-105, shall be expressed in unit containers of laundry sour for the examination in 4.3.1.1, 4.3.1.2 and in units of shipping containers for the examination in 4.3.1.3.

4.3.1.1 Examination of the laundry sour for defects in workmanship. The sample unit shall be one filled unit container.

Examine	Defect
Workmanship:	
Type I.....	Not clean; foreign matter present. Not homogeneous. Presence of "lumping or caking".
Type II.....	Not clean; foreign matter present. Not free flowing after application of moderate hand pressure. Not homogeneous. Presence of "lumping or caking".

4.3.1.2 Examination of the end item for net weight. The sample unit shall be one filled unit container. Weigh each filled unit container examined in 4.3.1.1. For lot acceptability, the average net weight per container must be not less than the weight specified in the contract or order (see 6.2).

4.3.1.3 Examination of preparation for delivery. An examination shall be made to determine that packing and markings comply with this specification. The sample unit for this examination shall be one shipping container, fully packed, selected just prior to the closing operation. Shipping containers

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fully prepared for delivery shall be examined for closure defects.

Examine	Defect
Packing-----	Not in accordance with contract requirements. Any leakage of contents. Liner material (as applicable) omitted, damaged, not specified type or not sealed. Any nonconforming, missing, damaged, or defective component. Container not as specified.
Marking (label or printing)--	Illegible, incorrect, incomplete, omitted; not in accordance with requirements. Label or printing not clear, smeared, not clean. Directions for use or precautionary markings not as specified.

4.3.1.4 *Inspection levels and AQLs for examinations.* The inspection levels and AQLs expressed in defects per 100 units, shall be as follows:

Examination paragraph	Inspection levels	AQLs
4.3.1.1	I	2.5
4.3.1.2	I	—
4.3.1.3	S-2	2.5

4.3.2 *Testing of the end item.* The methods of testing specified in Fed. Test Meth-

od Std. No. 536, wherever applicable, and as listed in table II, shall be followed. The sample unit for testing shall be one pound of laundry sour. The lot size shall be expressed in pounds of laundry sour. The sample size shall be as shown in the table below. The individual sample units shall be thoroughly mixed yielding the composite sample for testing purposes. Type I composite sample and a 4-ounce composite sample of the sodium acid fluoride used in the end item mixture shall be placed in individual clean, dry, glass, or metal containers and sealed. Type II composite sample shall be placed in a clean, dry, wide-mouth polyethylene bottle and sealed. Care shall be exercised to prevent contamination or alteration of the composite samples during the sampling, weighing, and storage. The lot shall be unacceptable if the composite sample fails to meet any test requirements specified. All test reports shall contain the individual values utilized in expressing the final result.

Lot size (pounds)	Sample size
800 or less-----	2
801 up to and including 22,000-----	3
22,001 or more-----	5

TABLE II. *Instructions for testing of the end item*

Characteristic	Specification reference		Requirements applicable to lot aver.	Number determinations per composite sample	Results reported as
	Requirement	Test method			
Type I: Sodium silico-fluoride (Na ₂ SiF ₆)	Table I	4.4.1	X	2	Average of 2 determinations to nearest 0.1 percent
Sodium acid fluoride (NaHF ₂)-----	Table I	4.4.2	X	2	Average of 2 determinations to nearest 0.1 percent
Oxalic acid-----	Table I	4.4.3	X	1	Pass or fail.
Matter insoluble in water-----	Table I	4.4.4	X	2	Average of 2 determinations to nearest 0.1 percent
Sieve test-----	Table I	2101	X	2	Average of 2 determinations to nearest 0.1 percent

TABLE II. Instructions for testing of the end item (cont'd)

Characteristic	Specification reference		Requirements, applicable to lot aver.	Number determinations per composite sample	Results reported as
	Requirement	Test method			
Type II: Preparation for testing-----		4.4.5			
Ammonium bifluoride (NH ₄ HF ₂)--	Table I	4.4.6	X	2	Average of 2 determinations to nearest 0.1 percent
Ammonium fluoride (NH ₄ F)-----	Table I	4.4.6	X	2	Average of 2 determinations to nearest 0.1 percent
Hydrofluoric acid (HF)-----	Table I	4.4.6	X	2	Average of 2 determinations to nearest 0.1 percent
Matter insoluble in water-----	Table I	4.4.7	X	2	Average of 2 determinations to nearest 0.1 percent

4.4 Test procedures.

4.4.1 Sodium silicofluoride (Na₂SiF₆) (type I).

4.4.1.1 Reagents.

a. *Ammonium molybdate solution.* Prepare ammonium molybdate solution by dissolving 50.0 g. of ammonium molybdate in 400 ml. of distilled water, transferring to a 500 ml. volumetric flask and dilute to mark.

b. *8-hydroxyquinoline solution.* Prepare 8-hydroxyquinoline solution by dissolving 20.0 g. of 8-hydroxyquinoline in 20 ml. of 6 N hydrochloric acid. Dilute solution to 100 ml, filter and dilute to 1 liter.

c. *Thymol blue.* Dissolve 0.100 g. of thymol blue in 4.3 ml. of 0.05 N NaOH, and dilute with carbon dioxide-free water to 200 ml.

4.4.1.2 *Procedure.* Determine sodium silicofluoride as follows: Weigh exactly 0.100 g. of type I sample into a 600-ml. polyethylene beaker. Add 2.8 g. of sodium hydroxide pellets, 100 ml. of water and heat on a steam bath until all the material has dissolved. Add 4.0 g. of boric acid and con-

tinue heating until the acid is in solution. Remove the beaker from the steam bath, neutralize dropwise with concentrated hydrochloric acid until the color just changes to red using 8 drops of thymol blue as the indicator. Add 8 ml. of hydrochloric acid (1 part HCl to 9 parts water by volume), 5 ml. of acetic acid (1:2) and 20 ml. of 10 percent ammonium molybdate solution. The molybdate solution should not be more than a week old. Keep the sample solution well agitated throughout the additions, and stir vigorously for a minute at the end. Allow 15 minutes for the formation of the molybdisilicic acid. Then add 40 ml. of hydrochloric acid (1:1) and precipitate immediately with 60 ml. of 8-hydroxyquinoline solution, stirring constantly during the addition. Cover the beaker and heat in a water bath at 60°C. for 10 minutes. Cool to room temperature in a cold water bath, allow the precipitate to settle and filter through a weighed Gooch crucible. Wash the beaker with water (use no more than 20 ml.) using a rubber policeman. Dry the precipitate for 1 hour at 105°C., cool in desiccator and weigh. Repeat the above procedure substituting 0.050 g. of the sodium acid fluoride, submitted by the manufacturer, for the original sample.

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Compute percent sodium silicofluoride in the sample by the following equation:

$$\frac{\text{Percent Na}_2\text{SiF}_6 = (A - B) \times 0.0251 \times 3.13 \times 100}{C}$$

where:

A = Weight of precipitate obtained from laundry sour sample (g.).

B = Weight of precipitate obtained from sodium acid fluoride (g.).

C = Weight of laundry sour sample (g.).

4.4.2 Sodium acid fluoride (NaHF₂) (type I).

4.4.2.1 Reagent.

Phenolphthalein (1.0 percent). 1.0 g. phenolphthalein dissolved in 99.0 g. of 95 percent ethyl alcohol.

4.4.2.2 *Procedure*. Determine sodium acid fluoride as follows:

Accurately weigh 0.100 g. of type I laundry sour into a large platinum dish. Add 100 ml. of distilled water and a few drops of phenolphthalein indicator. Titrate with 0.2 N sodium hydroxide solution. When the fading of the color becomes sluggish, heat the dish and contents and complete the titration with the solution boiling. Compute the percent sodium acid fluoride in the sample by the following equation:

$$\text{Percent NaHF}_2 = \frac{A - \left[\frac{(B \times C)}{(0.047 D)} \right] \times D \times 0.062 \times 100}{B}$$

where:

A = ml. of sodium hydroxide required for sample.

B = weight of sample (g.).

C = percent sodium silicofluoride in sample obtained from 4.4.1.2.

D = normality of the sodium hydroxide solution.

4.4.3 *Oxalic acid* (type I). Dissolve 0.100 g. of type I laundry sour in distilled water and bring the volume up to 100 ml. Pipette 5 ml. of the solution into a beaker containing litmus paper. Acidify the 5-ml. portion with dilute sulfuric acid (10 percent) and heat to 70° to 75°C. Add 1 ml. of dilute

potassium permanganate solution (0.050 g. in 100 ml. of distilled water). A negative test is indicated if the purple color persists for 3 minutes.

4.4.4 *Matter insoluble in water* (type I). Heat 500 ml. of distilled water to 37° to 38° C. in an Erlenmeyer flask. Add 1.000 ± 0.005 g. of type I laundry sour to the water in the flask. Stopper and shake the flask vigorously for 30 seconds. Filter the flask's contents rapidly by decantation through a weighed Gooch crucible with an asbestos mat (or a sintered glass crucible). Do not stir the solution. Complete the filtration in less than 2 minutes. Wash any solid material left in the flask into the filter by 3 separate 15-ml. maximum portions of 20° ± 2°C. distilled water. Do not wash crucible or contents any longer. Dry crucible and contents to constant weight at 105° to 110°C.

4.4.5 *Preparation for testing* (for type II). Grind the laundry sour in a wooden mortar to a 10 mesh particle size; transfer to a polyethylene wide-mouth bottle and mix well. Minimize exposure to the atmosphere to avoid absorption of moisture. Transfer a portion of the ground sour to a plastic weighing bottle.

4.4.6 *Ammonium bifluoride, ammonium fluoride, and hydrofluoric acid* (type II).

4.4.6.1 Apparatus.

a. Polyethylene beakers (200 to 300 ml.).

b. pH meter with glass electrode and saturated calomel reference electrode.

c. Polyethylene weighing bottle, wooden mortar, and pestle.

4.4.6.2 Reagents.

a. *Sodium hydroxide solution* (0.5 N).

b. *Neutral red* (0.1 percent). 0.100 g. dimethyldiaminophenazine-chloride in 100 g. of 90 percent ethyl alcohol.

c. *Special mixed indicator*. 30 ml. of 0.1 percent neutral red, 55 ml. of 0.2 percent p-nitrophenol, 110 ml. of 0.01 percent

methylene blue chloride, and 0.40 ml. 0.5 N hydrochloric acid. Store mixture in an amber bottle.

d. *Methylene blue chloride* (0.01 percent). 0.010 g. of methylene blue chloride in 100 g. of distilled water.

e. *Phenolphthalein* (1.0 percent). 1.0 g. phenolphthalein in 99.0 g. of 95 percent ethyl alcohol.

f. *Neutral formaldehyde*. Mix 25 ml. of 37 percent formaldehyde solution with 25 ml. of distilled water and 2.0 ml. of a 1.0 percent phenolphthalein solution. Titrate with 0.5 N NaOH solution to a faint pink. Prepare this solution as needed.

g. *Ammonium chloride solution buffered to pH 6.8*. Dissolve 1.0 g. NH_4Cl in 75 ml. of distilled water. Adjust the solution to pH 6.8 with ammonia using a pH meter.

4.4.6.3 *Procedure*. Weigh 1.400 ± 0.005 g. of type II sample to the nearest 0.001 g. from the plastic weighing bottle and transfer to a plastic beaker. Dissolve the sample in 50 ml. of carbon dioxide-free water. Add 7 drops of special mixed indicator. Titrate with 0.5 N NaOH solution to match the color shown by 50 ml. of the ammonium chloride solution adjusted to pH 6.8 to which has been added 7 drops of special mixed indicator. Record this volume of 0.5 N NaOH solution as titration A for total acidity. Add 50 ml. of carbon dioxide-free water and 25 ml. of neutral formaldehyde to the above tested solution. Titrate with 0.5 N NaOH solution to a phenolphthalein end point that remains for about 15 seconds. Cover the beaker and let the solution stand for at least 15 minutes. Continue titration to the pink end point. Record this volume of 0.5 N NaOH solution as titration B.

If titration B is greater than titration A, ammonium fluoride (NH_4F) is present. Calculate by this formula:

$$\frac{A \times N \text{ NaOH} \times 0.05705^1}{\text{Weight of sample}} \times 100 = \text{Percent ammonium bifluoride } (\text{NH}_4\text{HF}_2)$$

$$\frac{(B - A) \times N \text{ NaOH} \times 0.03704^1}{\text{Weight of sample}} \times 100 = \text{Percent ammonium fluoride } (\text{NH}_4\text{F})$$

If titration A is greater than titration B, hydrofluoric acid (HF) is present. Calculate by this formula:

$$\frac{B \times N \text{ NaOH} \times 0.05705^1}{\text{Weight of sample}} \times 100 = \text{Percent ammonium bifluoride } (\text{NH}_4\text{HF}_2)$$

$$\frac{(A - B) \times N \text{ NaOH} \times 0.02000^1}{\text{Weight of sample}} \times 100 = \text{Percent hydrofluoric acid } (\text{HF})$$

¹ Denotes g. of material being determined equivalent to 1 ml. of N NaOH solution.

4.4.7 *Matter insoluble in water (type II)*. Heat 50 ml. of distilled water to 37° to 38° C. in a 250-ml. Erlenmeyer pyrex flask. Add 1.000 ± 0.100 g. sample of type II laundry sour, not previously ground, to the water in the flask. Swirl the flask vigorously for 30 seconds. The laundry sour shall completely dissolve in 30 seconds.

5. PREPARATION FOR DELIVERY

For civil agency procurement, the definitions and application of levels of packing shall be in accordance with Fed. Std. No. 102.

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

5.1.1 *Level A*. Fifty or one hundred pounds of the laundry sour, as specified (see 6.2), shall be packed in a fiber drum conforming to type III, grade A of PPP-D-723. Each drum shall be lined with a minimum 0.002-inch thick polyethylene bag type 1, grade A, finish 1 of L-P-378. All seams and closures of the polyethylene bag shall be effected by heat sealing and shall conform to the heat seal strength requirement of L-P-378.

5.1.2 *Level B*. Fifty or one hundred pounds of the laundry sour, as specified (see 6.2), shall be packed in a fiber drum

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conforming to type II, grade A of PPP-D-723. Each drum shall be lined as specified in 5.1.1.

5.1.3 *Level C.* The laundry sour shall be packed in a manner to insure acceptance and safe delivery at destination at the lowest transportation rate for such supplies. Containers shall be in accordance with rules or regulations of carriers applicable to the mode of transportation.

5.2 Marking.

5.2.1 *Labeling.* Each container shall be labeled in accordance with MIL-STD-129, containing the legend as specified in 3.2.

5.2.2 *Civil agencies.* In addition to any special marking required by the contract or order, shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.2.3 *Military requirements.* In addition to any special marking required by the contract or order, shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 *Intended use.* Types I and II laundry sours covered by this specification are intended for use in washing formulas to neutralize any residual alkali present either in the fabrics after rinsing or in the water supply, and to remove rust stains and prevent discoloration of the fabrics. Type I is applied by dusting on the revolving cylinders of washing machines; type II is applied as a prepared stock solution to be diluted as required by modern automatically controlled washers.

6.2 *Ordering data.* Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Type required (see 1.2).
- (c) Selection of applicable level of packing required (see 5.1).

(d) Quantity of laundry sour desired per shipping container (see 5.1.1 and 5.1.2).

6.3 Source of other laundry sours.

6.3.1 *Acetic acid sour.* Acetic acid sour may be prepared by diluting the acid covered by O-A-76.

6.3.2 *Oxalic acid sour.* Oxalic acid sour may be procured under O-O-690.

6.4 *Transportation descriptions.* Transportation descriptions and minimum weights applicable to this commodity are:

Rail:

Laundry sour, not otherwise indexed by name.

Carload minimum weight 36,000 pounds.

Motor:

Laundry sour, not otherwise indexed.

Truckload minimum weight 36,000 pounds subject to Rule 115, National Motor Freight Classification.

CUSTODIANS:

Army—GL

Navy—SH

Air Force—69

Review activities:

Army—GL, MD

Air Force—69

User activities:

Navy—SH, YD, MC

Preparing activity

Army—GL

Review and User information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing Of DOD Standardization Documents.

★ U.S. GOVERNMENT PRINTING OFFICE: 1965-203381/283

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 extra copies and other documents referenced herein. Price 5 cents each.

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 119-R004

INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity (as indicated on reverse hereof).

SPECIFICATION

ORGANIZATION (of submitter)

CITY AND STATE

CONTRACT NO.

QUANTITY OF ITEMS PROCURED

DOLLAR AMOUNT

\$

MATERIAL PROCURED UNDER A

 DIRECT GOVERNMENT CONTRACT SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

D. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES.

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

 YES NO IF "YES", IN WHAT WAY?

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity)

DATE