

L-P-1035A

May 21, 1974

SUPERSEDING

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March 31, 1967

FEDERAL SPECIFICATION

PLASTIC MOLDING MATERIAL, VINYL CHLORIDE  
POLYMER AND VINYL CHLORIDE-VINYL ACETATE  
COPOLYMER, RIGID

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 rigid polyvinylchloride and vinyl chloride-vinyl acetate copolymer material in the form specified by the procuring agency (see 3.3).

1.2 Classification.

1.2.1 Compositions, forms, types, classes, and grades. The material covered by this specification shall be of the following basic compositions, forms, types, classes, and grades, as specified (see 6.2).

Composition A - Polyvinylchloride

Forms (see 6.4):

Pellets  
Granular  
Powder

Type I - High mechanical properties excluding impact strength, which is moderate, and high chemical resistance.

Class 1 - Maximum mechanical properties, excluding impact strength, and maximum chemical resistance.

Class 2 - Maximum mechanical properties, excluding impact strength, and high chemical resistance.

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Class 3 - High mechanical properties, excluding impact strength, and maximum chemical resistance.

Grade E - Electrical quality.

Grade NT - Non-toxic according to intended use.

Type II - High impact strength, moderate chemical resistance.

Grade E - Electrical quality.

Grade GU - General usage.

Grade NT - Non-toxic according to intended use.

Type III - Medium impact strength, low chemical resistance.

Grade E - Electrical quality.

Grade GU - General usage.

Grade NT - Non-toxic according to intended use.

Composition B - Vinyl chloride-vinyl acetate copolymer.

Forms (see 6.4):

Pellets

Granular

Powder

Type I - Unmodified.

Class 1 - Colored.

Class 2 - Minimum color, maximum clarity.

Type II - Modified.

Class 1 - Medium impact strength.

Class 2 - Moderately high impact strength.

Class 3 - Very high impact strength.

## 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-D-723 - Drums, Fiber.

PPP-D-729 - Drums, Shipping and Storage, Steel, 55-Gallon.

### Federal Standard:

Fed. Std. No. 123 - Marking for Domestic 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, D. C. 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, D. C., Atlanta, Chicago, Kansas City, Mo., Fort Worth, Denver, San Francisco, Los Angeles and Seattle, Washington.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from the 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.
- MIL-STD-167 - Mechanical Vibrations of Shipboard Equipment.

(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 publications. The following publications 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.

#### American Society for Testing and Materials (ASTM) Standards:

- D 149 - Dielectric Breakdown Voltage and Dielectric Strength of Electrical Insulating Materials at Commercial Power Frequencies.
- D 150 - A-C Loss Characteristics and Dielectric Constant Permittivity of Solid Electrical Insulating Materials.
- D 256 - Impact Resistance of Plastics and Electrical Insulating Materials.
- D 257 - Electrical Resistance of Insulating Materials.
- D 471 - Change in Properties of Elastomeric Vulcanizates Resulting from Immersion in Liquids.
- D 543 - Resistance of Plastics to Chemical Reagents.
- D 618 - Conditioning Plastics and Electrical Insulating Materials for Testing.

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- D 635 - Flammability of Rigid Plastics Over 0.127 cm (0.050 in.) in Thickness.
- D 638 - Tensile Properties of Plastics.
- D 648 - Deflection Temperature of Plastics Under Flexural Load.
- D 790 - Flexural Properties of Plastics.
- D 792 - Specific Gravity and Density of Plastics by Displacement.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania, 19103.)

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, D. C. 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, Illinois 60606).

(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 Material. The material shall consist of virgin rigid vinyl chloride polymer or virgin vinyl chloride-vinyl acetate copolymer (see 6.3), as specified by composition (see 1.2.1 and 6.2), plus compounding ingredients to permit processing and impart stability, and pigments required for colored material.

3.2 Property values. Test specimens of the material prepared and tested in accordance with the applicable procedure of 4.3 shall conform to the requirements of tables I and II, as applicable. In addition, electrical quality material, grade E, shall conform to the requirements of table III.

TABLE I - Composition A, property requirements for rigid polyvinyl chloride

| Property  | Type I, Grades E and NT |         | Type II              |                      | Type III             |                      |
|---|-------------------------|---------|----------------------|----------------------|----------------------|----------------------|
|   | Class 1                 | Class 2 | Grades E, GU, and NT | Grades E, GU, and NT | Grades E, GU, and NT | Grades E, GU, and NT |
| Tensile strength, p.s.i., min.                              | 7,000                   | 7,000   | 5,500                | 5,500                | 5,000                | 5,000                |
| Modulus of elasticity in tension, p.s.i., min.              | 400,000                 | 400,000 | 300,000              | 300,000              | 300,000              | 300,000              |
| Flexural strength, p.s.i., min.                             | 11,000                  | 11,000  | 8,500                | 8,500                | 8,500                | 8,500                |
| Impact strength (Izod), ft.-lb. per in. of notch, min.      | 0.65                    | 0.65    | 5.0                  | 5.0                  | 1.5                  | 1.5                  |
| Deflection temperature under load at 264 p.s.i., min., °C.  | 70                      | 70      | 66                   | 66                   | 66                   | 66                   |
| Flammability  | SE <sup>1/</sup>        | SE      | SE                   | SE                   | SE                   | SE                   |
| Chemical resistance:  |                         |         |                      |                      |                      |                      |
| 93.0 percent sulfuric acid, 14 days flotation at 55° ± 2°C. |                         |         |                      |                      |                      |                      |
| Change in weight:   |                         |         |                      |                      |                      |                      |
| Increase, max., percent                                     | 5.0 <sup>2/</sup>       | 25.0    | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    |
| Decrease, max., percent                                     | 0.1 <sup>2/</sup>       | 0.1     | 0.1 <sup>2/</sup>    | 0.1 <sup>2/</sup>    | 0.1 <sup>2/</sup>    | 0.1 <sup>2/</sup>    |
| Change in flexural strength:                                |                         |         |                      |                      |                      |                      |
| Increase, max., percent                                     | 5.0 <sup>2/</sup>       | 5.0     | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    | 5.0 <sup>2/</sup>    |
| Decrease, max., percent                                     | 25.0 <sup>2/</sup>      | 50.0    | 25.0 <sup>2/</sup>   | 25.0 <sup>2/</sup>   | 25.0 <sup>2/</sup>   | 25.0 <sup>2/</sup>   |
| 80 percent sulfuric acid, 30 days immersion at 60° ± 2°C.   |                         |         |                      |                      |                      |                      |
| Change in weight:   |                         |         |                      |                      |                      |                      |
| Increase, max., percent                                     | NA                      | 5.0     | NA                   | 15.0                 | NA                   | NA                   |
| Decrease, max., percent                                     | NA                      | 5.0     | NA                   | 0.1                  | NA                   | NA                   |
| Change in flexural strength:                                |                         |         |                      |                      |                      |                      |
| Increase, max., percent                                     | NA                      | 15.0    | NA                   | 25.0                 | NA                   | NA                   |
| Decrease, max., percent                                     | NA                      | 15.0    | NA                   | 25.0                 | NA                   | NA                   |
| ASTM Oil No. 3, 30 days in immersion at 23°C.               |                         |         |                      |                      |                      |                      |
| Change in weight:   |                         |         |                      |                      |                      |                      |
| Increase, max., percent                                     | 1.0                     | 1.0     | 1.0                  | 10.0                 | 10.0                 | 10.0                 |
| Decrease, max., percent                                     | 1.0                     | 1.0     | 1.0                  | 0.1                  | 0.1                  | 1.0                  |

1/SE = Self-extinguishing.

2/Specimens washed in running water and dried by an air blast or other mechanical means shall show no sweating within 2 hours after removing from the acid bath.

3/NA = Not applicable.

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TABLE II - Composition B, Property requirements for rigid vinyl chloride-vinyl acetate copolymer

| Property  | Type I  |         |                  | Type II |         |         |
|---|---------|---------|------------------|---------|---------|---------|
|   | Class 1 | Class 2 | Class 3          | Class 1 | Class 2 | Class 3 |
| Tensile strength,<br>p.s.i., min.                               | 6,000   | 6,800   | 5,500            | 5,500   | 5,000   | 5,000   |
| Modulus of elasticity in tension,<br>p.s.i., min.               | 350,000 | 350,000 | 300,000          | 300,000 | 275,000 | 250,000 |
| Impact strength (Izod),<br>ft.-lb. per inch of notch, min.      | 0.4     | 0.4     | 1.0              | 1.0     | 3.0     | 10.0    |
| Deflection temperature under load at (264<br>p.s.i.), min., °C. | 58      | 53      | 58               | 58      | 58      | 58      |
| Specific gravity 23/23°C., min.                                 | 1.35    | 1.35    | NA <sup>1/</sup> | NA      | NA      | NA      |

Flammability

<sup>1/</sup>NA = Not applicable<sup>2/</sup>Burning extent of less than 4 inches by ASTM test specified in 4.3.7 correlation with flammability under actual use conditions is not necessarily implied.Less than 4 inches<sup>2/</sup>/Less than 4 inches Less than 4 inches Less than 4 inches Less than 4 inches

TABLE III - Property requirements for grade E (electrical quality material)

| Property   | Value<br>required<br>1 x 10 <sup>8</sup> |
|--|--|
| Volume resistivity, megohm-centimeters (meg.-cm.), min.                | 400                                      |
| Dielectric strength, flatwise, volts per mil., min.<br>Short time test | 3.90                                     |
| Dielectric constant, max.,<br>At 1 KHz                                 | 3.30                                     |
| Normal conditioning <sup>1/</sup>                                      | 3.40                                     |
| At 1 MHz   | 3.10                                     |
| Normal conditioning <sup>1/</sup>                                      |  |
| After immersion <sup>2/</sup>  |  |
| At 30 MHz  |  |
| Normal conditioning <sup>1/</sup>                                      |  |
| Dissipation factor, max. <sup>3/</sup>                                 |  |
| At 1 KHz   | 0.017                                    |
| Normal conditioning <sup>1/</sup>                                      |  |
| At 1 MHz   | 0.018                                    |
| Normal conditioning <sup>1/</sup>                                      |  |
| After immersion <sup>2/</sup>  | 0.022                                    |
| At 30 MHz  |  |
| Normal conditioning <sup>1/</sup>                                      | 0.015                                    |

<sup>1/</sup>Normal conditioning shall be for 96 hours minimum at 23° ± 1°C. (73.4° ± 1.8°F.) and 50 ± 5 percent relative humidity.<sup>2/</sup>The specimen shall be conditioned for 96 hours minimum at 23° ± 1°C. (73.4° ± 1.8°F.) and 50 ± 5 percent relative humidity and then immersed for 48 hours in distilled water at 50° ± 1°C. (122° ± 1.8°F.) followed by immersion for 1/2 hour in distilled water at 23° ± 1°C. (73.4° ± 1.8°F.). Specimens shall be wiped first with a damp cloth and then with a dry cloth. The test shall be started within 2 minutes after removing specimens from conditioning bath.<sup>3/</sup>Determinations made concurrently with those of dielectric constant, using the same specimens.

3.3 Form. The form (see 6.2 and 6.4) shall be as specified by the procuring agency.

3.4 Color. The color (see 6.2) shall be as specified by the procuring agency.

3.5 Uniformity. The material shall be uniform in appearance, and form as determined by visual inspection.

3.6 Workmanship. The material shall be clean and contain no foreign particles or other contamination.

3.7 Nontoxicity. When grade NT is specified, the material furnished shall be made only of a compound certified for nontoxicity by the supplier in accordance with the procedure specified in 4.3.13.

3.8 Suitability for use with explosives or chemicals. When suitability for use with a particular explosive or chemical is specified, the material furnished shall be made only of a compound which has been approved by the procuring agency for this service (see 6.2 and 6.6).

3.9 Suitability for shipboard installations. When suitability for shipboard installations is specified by the procuring agency (see 6.2), test specimens (see 4.3.14) shall pass type I environmental vibration tests of MIL-STD-167.

#### 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, 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 Sampling for inspection and acceptance. Sampling for inspection and acceptance shall be performed in accordance with the provisions set forth in MIL-STD-105 except where otherwise indicated. For purposes of sampling, an inspection lot for examination and tests shall consist of all material of the same composition, type, class, and grade, as applicable, submitted for delivery at one time.

4.2.1 Inspection of materials and components. In accordance with 4.1, the supplier is responsible for insuring that materials and components used were manufactured, tested, and inspected in accordance with the requirements of referenced subsidiary specifications and standards to the extent specified. In the event of conflict, this specification will govern. A supplier's certificate of compliance with 3.1 shall be furnished.

4.2.2 Inspection of material.

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4.2.2.1 Examination of the material. Examination of the material shall be made in accordance with the classification of defects, inspection levels, and acceptable quality levels (AQLs) set forth below. The lot size, for purpose of determining the sample size in accordance with MIL-STD-105, shall be expressed in units of pounds for examination in 4.2.2.1.1, and in units of shipping containers for examination in 4.2.2.1.2.

4.2.2.1.1 Examination of the material for defects in appearance and workmanship. The sample unit for the examination specified in table IV, shall be approximately one pound.

Table IV - Examination of the material for defects in appearance and workmanship.

| Examine                    | Defect  |
|----------------------------|---|
| Appearance and Workmanship | Form or color not uniform.<br>Form not as specified.<br>Color not as specified.<br>Not clean, presence of foreign material. |

4.2.2.1.2 Examination of the preparation for delivery requirements. An examination shall be made in accordance with table V to determine that packing and marking comply with section 5 requirements. The sample unit for this examination shall be one shipping container fully packed, selected just prior to the closing operation. Shipping containers fully prepared for delivery shall be examined for closure defects.

Table V - Examination of the preparation for delivery.

| Examine              | Defect   |
|----------------------|--|
| Packing              | Not level specified; not in accordance with contract requirements.<br><br>Any nonconforming component, component missing, damaged or otherwise defective affecting serviceability.<br><br>Inadequate application of components such as: incomplete closures of case liners; container flaps, loose or inadequate strappings, bulged or distorted containers. |
| Quantity of material | Less than specified or indicated quantity.   |
| Weight               | Gross weight exceeds specified requirements.   |
| Markings             | Interior or exterior markings omitted, illegible, incorrect, of improper size, location, sequence or method of application, or not in accordance with contract requirements.   |



4.2.2.1.3 Inspection levels and acceptable quality levels (AQLs) for examinations. The inspection levels for determining the sample size and the acceptable quality level (AQL) expressed as defects per 100 units shall be as follows:

| <u>Examination paragraph</u> | <u>Inspection level</u> | <u>AQL</u> |
|------------------------------|-------------------------|------------|
| 4.2.2.1.1                    | II                      | 2.5        |
| 4.2.2.1.2                    | S-2                     | 2.5        |

4.2.3 Testing. The material shall be tested for the applicable characteristics listed in tables I, II, and III in accordance with the test methods specified herein, for each lot submitted for inspection. The lot size, for the purpose of determining sample size for testing, shall be expressed in units of 50 pounds of material. The sample unit shall consist of sufficient material to prepare all specimens required for testing. The inspection level shall be S-1 with an acceptance number of 0. The results of each test shall be the averaged results of the specimens. For chemical resistance determination only, testing shall be performed on the first lot of material furnished under this specification and on any subsequent lot specified by the procuring agency (see 6.2).

#### 4.3 Test methods.

4.3.1 Preparation of specimens. Test specimens shall be prepared by molding or extrusion under conditions specified by the manufacturer. For repeat or referee testing, only compression molded specimens shall be used. Test specimens for deflection temperature shall be conditioned in accordance with procedure B of ASTM D 618 except that the minimum conditioning time shall be 24 hours. All other test specimens shall be conditioned in accordance with procedure A of ASTM D 618 and the minimum conditioning time shall be 24 hours.

4.3.2 Test conditions. Unless otherwise specified by the applicable test method, all tests shall be performed in a standard laboratory atmosphere of  $23^{\circ} \pm 2^{\circ}\text{C}$  ( $73.4^{\circ} \pm 3.6^{\circ}\text{F}$ ) and  $50 \pm 5$  percent relative humidity.

4.3.3 Tensile strength and modulus of elasticity. Three specimens shall be tested in accordance with ASTM D 638.

4.3.4 Flexural strength. Three specimens shall be tested in accordance with ASTM D 790, using procedure B.

4.3.5 Impact strength. Five specimens shall be tested in accordance with ASTM D 256, using method A, and 0.25 or 0.5 inch thick specimens.

4.3.6 Deflection temperature. Three specimens shall be tested in accordance with ASTM D 648. Each specimen shall be  $1/8 \pm 1/100$  inch thick.

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4.3.7 Flammability. Three specimens shall be tested in accordance with ASTM D 635.

4.3.8 Chemical resistance. Three specimens shall be tested in accordance with ASTM D 543, using 1 by 3 by 1/8 inch specimens as specified in section 6 (b) of ASTM D 543. The reagents specified in table I shall conform to the following:

- (a) 93.0 percent sulfuric acid. The acid shall be 66° Baumé (92.98 to 93.41 percent sulfuric acid ( $H_2SO_4$ ), sp. gr. 1.8344 to 1.8364 at 60°/60°F). This test shall be run in a test tube selected for size so that the specimen floats vertically.
- (b) 80 percent sulfuric acid. The concentration of 80 percent  $H_2SO_4$  is not critical but must be held to an  $80 \pm 2$  percent level to meet the requirements of this specification. The samples must be immersed completely. Glass or acid-resistance wire may be used for sinkers.
- (c) Adjustment of acid strength. The  $H_2SO_4$  content of the acid solutions may be determined by titration with sodium hydroxide (NaOH) solution and methyl orange indicator or by specific gravity with hydrometers sensitive and accurate to 0.001. The  $H_2SO_4$  content should be adjusted to the required strength by mixing dilute and concentrated acids.
- (d) ASTM Oil No. 3 - ASTM Oil No. 3 shall meet the requirements specified in ASTM D 471.

4.3.9 Specific gravity. Three specimens shall be tested in accordance with ASTM D 792.

4.3.10 Volume resistivity. Five specimens shall be tested in accordance with ASTM D 257.

4.3.11 Dielectric strength. Five specimens shall be tested under oil at a frequency not exceeding 60 Hertz in accordance with ASTM D 149.

4.3.12 Dielectric constant and dissipation factor. Five specimens shall be tested in accordance with ASTM D 150. The dissipation factor of the material is the tangent of the dielectric loss angle.

4.3.13. Nontoxicity. Certification for nontoxicity shall be conducted in accordance with the intended use of the material as follows:

- (a) For use in potable water systems, the material shall be properly selected to meet conditions of service and, in addition, be certified by the National Sanitation Foundation Testing Laboratory or other impartial agency using an equivalent program of control.
- (b) For use as plastic food wrappers and containers, the material shall be approved by Food and Drug Administration.
- (c) For use as plastic materials in clothing and equipment, such that contact with the skin under normal usage or intimate and frequent handling or other medical implications are present, the material shall be approved by the Defense Personnel Support Center.

4.3.14 Suitability for shipboard installations. The application during testing, the dimensions, and the number of specimens shall be as specified by the procuring agency. Testing shall be in accordance with type I environmental vibration testing of MIL-STD-167.

## 5. PREPARATION FOR DELIVERY

Application. The requirements of section 5 apply only to purchase by or direct shipment to the Government.

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

5.1.1 Level A. Unless otherwise specified, the material shall be packed in one of the following types of containers:

- (a) Fiber drums conforming to PPP-D-723, type II, grade A, or type III, grade A in quantities of 200 pounds, maximum.
- (b) Metal drums conforming to PPP-D-729, type III or type IV, in quantities of 400 pounds, maximum.

Insofar as practical, drums shall be of uniform shape and size, with minimum cube and tare consistent with the protection required. Drums shall contain identical quantities and shall be closed in accordance with the applicable container specification. Fiber drums shall be furnished with a 0.004 inch thick polyethylene liner properly heat sealed.

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5.1.2 Level B. Unless otherwise specified, the material shall be packed in one of the following types of containers:

- (a) Fiber drums conforming to PPP-D-723, type I, grade A in quantities of 200 pounds maximum.
- (b) Metal drums conforming to PPP-D-729, type III or type IV, in quantities of 400 pounds, maximum.

Insofar as practical, drums shall be of uniform shape and size with minimum cube and tare consistent with the protection required. Drums shall contain identical quantities and shall be closed in accordance with the applicable container specification. Fiber drums shall be furnished with a 0.004 inch thick polyethylene liner properly heat sealed.

5.1.3 Level C. Packing shall be in accordance with commercial practice adequate to insure acceptance and delivery by the carrier for the mode of transportation employed. Containers shall comply with the requirements of the Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable to the mode of transportation.

## 5.2 Marking.

5.2.1 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.

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

## 6. NOTES

6.1 Intended use. Rigid polyvinyl chloride (composition A) possesses a unique combination of strength, durability, and chemical resistance. Also, it is self-extinguishing and hence will not support combustion. Types I and II polyvinyl chloride are used in large quantities for pipe and building applications as well as sheeting. Type III, grade GU, is used where the higher mechanical and chemical resistance of types I and II are not required. Grade E is used where electrical quality is important; and grade NT is used primarily for piping and containers requiring storing and handling of potable materials.

The rigid copolymer (composition B) is used where greater flexibility is required than can be obtained with composition A. Applications include sheet and protective coatings. Type I, class 2, copolymers are used where maximum transparency is required. Type II copolymers are used where greater impact strength than offered by type I copolymers, are required.

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) Composition, type, class, and grade, as applicable, required.
- (c) Form required (see 1.2.1 and 3.3).
- (d) Color required, if any (see 3.4).
- (e) Suitability for use with explosives, if required (see 3.8).
- (f) Suitability for shipboard installations, if required (see 3.9).
- (g) Chemical resistance test when required (see 4.2.3).
- (h) Selection of the applicable level of packaging and packing required (see section 5).

6.3 Copolymer composition. Normally the requirements specified herein for Composition B can be met with copolymers containing less than 20 percent vinyl acetate by weight.

6.4 Form. These materials normally are supplied in pelletized, granular or powder blend form suitable for molding, extrusion, or calendering.

6.5 Electrical properties. The electrical properties specified herein are basic properties of polyvinyl chloride molecules. Accordingly, these properties should remain constant when there is conformance to the property values specified in table I.

6.6 Suitability for use with explosives. Information concerning suitability of many plastics for use with various explosives under various conditions is on file at Picatinny Arsenal, Dover, New Jersey. Procuring agencies desiring information on this subject should contact Picatinny Arsenal to determine if information is readily available.

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6.7 International standardization agreement. Certain provisions of this specification are the subject of international standardization agreement ABC-NAVY-STD-17C. When amendment, revision, or cancellation of this specification is proposed which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required.

**MILITARY CUSTODIANS:**

Army - MR  
Air Force - 11

**Preparing activity:**

Army - MR

**Review activities:**

Army - EL  
Air Force - 11, 84

**CIVIL AGENCY COORDINATING ACTIVITIES:**

GSA-FSS  
COM-NBS

**User activities:**

Army - GL, ME  
Navy - AS, OS, SH

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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 15 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.

SPECIFICATION **L-P-1035A, Plastic Molding Material, Vinyl Chloride Polymer and Vinyl Chloride-Vinyl Acetate Copolymer, Rigid**

ORGANIZATION

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.

B. 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

DD FORM 1426  
1 APR 63

REPLACES NAVSHIPS FORM 4863, WHICH IS OBSOLETE