

MIL-A-5540B

23 March 1967

SUPERSEDING

MIL-A-5540A

20 February 1963

(see 6.6)

## MILITARY SPECIFICATION

### ADHESIVE, POLYCHLOROPRENE

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

#### 1. SCOPE

1.1 Scope - This specification covers neoprene adhesives for joining neoprene coated fabric to itself and to nylon.

\* 1.2 Classification - Adhesives shall be of the following classes, as specified (see 6.1 and 6.6).

Class 1 - Heat cure for manufacture (coating to coating, heat stable to 140° F).

Class 2 - Room temperature cure for manufacture (coating to coating, heat stable to 140° F).

Class 3 - Room temperature cure for repair (coating to coating, heat stable to 140° F).

Class 4 - Heat cure for manufacture (coating to nylon).

Class 5 - Room temperature cure for repair (coating to nylon).

#### 2. APPLICABLE DOCUMENTS

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

FSC 8040

**MIL-A-5540B****SPECIFICATIONS****Federal**

TT-P-143	Paint, Varnish, Lacquer, and Related Materials; Packaging, Packing, and Marking of
TT-T-548	Toluene; Technical
PPP-B-585	Boxes, Wood, Wirebound
PPP-B-591	Boxes, Fiberboard, Wood-Cleated
PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-621	Boxes, Wood, Nailed and Lock-Corner
PPP-B-C36	Box, Fiberboard
PPP-C-96	Cans, Metal, 28 Gage and Lighter
PPP-T-60	Tape, Pressure Sensitive Adhesive, Waterproof--for Packaging and Sealing

**Military**

MIL-L-10547	Liners, Case, and Sheet, Overwrap, Water-Vaporproof or Waterproof, Flexible
MIL-C-19002	Cloth, Coated; and Tape, Coated Cloth-- Chloroprene on Nylon, Pneumatic Life Preserver

**STANDARDS****Federal**

FED-STD-595	Colors
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**Military**

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

(Copies of specifications, standards, drawings, and publications required by suppliers 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 document forms 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 proposal shall apply.

### CONSOLIDATED CLASSIFICATION COMMITTEE Uniform Freight Classification Rules.

(Application for copies should be addressed to the Consolidated Classification Committee, 202 Chicago Union Station, Chicago 6, Ill.)

## 3. REQUIREMENTS

3.1 Qualification - The adhesives furnished under this specification shall be products which have been tested and have passed the qualification tests specified herein, and have been listed on or approved for listing on the applicable Qualified Products List.

3.2 Materials - The ingredients used in the manufacture of these products shall be of high quality, suitable for the purpose, and shall not cause deterioration of the materials with which they come in contact. The base polymer shall be polychloroprene. No natural, reclaimed, or other synthetic rubbers shall be used in the manufacture of these adhesives.

3.2.1 Formulation changes - The adhesives shall be approved only for the formulation for which qualification tests are made. Changes such as the adding of pigments, hardeners, solvents, or fillers, changing color, or any other changes in formulation not authorized by the Naval Air Systems Command, shall be cause for designating the adhesive as a new material which shall not be considered approved. The manufacturer may submit the modified adhesive for approval under this specification, using a new manufacturer's designation.

3.3 Forms - Adhesives may be either one-part or two-part adhesive, the latter to consist of a base and a separate accelerator.

3.4 Colors - The adhesive color shall approximate one of the following colors, as specified in FED-STD-595 (see 6.2):

Olive drab	- 24087
Yellow	- 23538
Red	- 21158
Grey	- 26081
Orange	- 22246

MIL-A-5540B

Green - 24227  
 Black - 27038  
 Blue - 25177  
 Neutral

3.5 Physical properties - The physical properties of the adhesives shall conform to the requirements specified in Table I.

TABLE I  
 PHYSICAL PROPERTIES

TEST	REQUIREMENTS		
	CLASSES 1, 2	CLASS 3	CLASSES 4, 5
Viscosity (centipoises)			
As received	400 to 2000	400 to 2000	400 to 2000
After accelerated storage	--	<u>1</u> /	<u>1</u> /
Strip adhesion			
Coating to coating			
As received (lbs./inch width) (min)	8	8	--
After bond aging (% of as received value)(min)	80	80	--
After water immersion (lbs./ inch width)(min)	6	6	--
Coating to nylon			
As received (lbs./inch width) (min)	--	--	5
After bond aging (% of as received value) (min)	--	--	80
After water immersion (lbs./ inch width) (min)	--	--	4

1/ Shall not vary from "As received" viscosity by more than -20 +30 percent.

MIL-A-5540B

- \* 3.5.1 Brushability - All five classes of adhesives shall be readily brushable (i.e., flow easily and cover surfaces adequately and evenly) when mixed and applied in accordance with the manufacturer's instructions. All five classes of adhesives shall be readily brushable without thinning in the "As received" and "After working life" (6 hours after mixing) conditions. In addition, Classes 3, 4, and 5 adhesives shall be readily brushable without thinning in the "After accelerated storage" condition.
- \* 3.5.2 Working life - The working life for all five classes of adhesives shall be a minimum of 6 hours when prepared and tested as specified in 4.7.2.
- \* 3.5.3 Accelerated storage - Classes 3, 4, and 5 adhesive when stored as specified in 4.7.4 shall not gel or deteriorate and shall be readily brushable.
- 3.5.4 Dead load - The Classes 1, 2, and 3 adhesives when tested as specified in 4.7.6 shall be capable of supporting a dead load of 75 pounds for 24 hours at 140° F (60° C) without separation or creep of any of the three seams tested.
- 3.6 Toxicity - The material shall have no adverse effect on the health of personnel when used for its intended purpose (see 6.4).
- 3.7 Workmanship - The adhesive shall be prepared in accordance with the best commercial practice. It shall be free of suspended foreign matter which will appear later upon application.

#### 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 supplies and services conform to prescribed requirements.

4.2 Classification of tests - The inspection and testing of the adhesives shall be classified as follows:

- (a) Qualification tests (4.3).
- (b) Quality conformance tests (4.4).
- (c) Government production control tests (4.5).

#### 4.3 Qualification tests -

4.3.1 Sampling instructions - Qualification test samples shall consist of 4 quarts of the adhesive base, together with the necessary accelerator for each color for which qualification is applied for. The adhesive and accelerator shall be furnished in containers of the type to be used in filling contract orders. Samples shall be forwarded to the Supply Officer, Naval Air Engineering Center, Philadelphia, Pennsylvania 19112, marked Attention: Director, Aeronautical

## MIL-A-5540B

Materials Laboratory, plainly and durably marked with the following information:

Samples for qualification test.  
ADHESIVE, POLYCHLOROPRENE.  
Specification MIL-A-5540B.  
Class                      Color  
Date of manufacture.  
Name and address of manufacturer.  
Manufacturer's identification (base and accelerators,  
as required).  
Submitted by (name) (date) for qualification test in  
accordance with the requirements of Specification  
MIL-A-5540B under authorization (reference authorizing  
letter).

4.3.2            Manufacturer's data - Two copies of the manufacturer's test report, containing complete test data showing that material submitted for qualification conforms to the requirements of this specification, shall be submitted with qualification samples. Location and identity of the plant which produced the samples tested shall also be supplied.

4.3.3            Manufacturer's instructions - Duplicate copies of the manufacturer's instructions for use of the adhesive shall be furnished at the time the sample is submitted for test for qualification. These instructions shall include the information specified in 5.3.1.1, 5.3.1.2, and 5.3.1.3.

4.3.4            Tests - The qualification tests of the adhesives shall consist of all the tests of this specification, as specified under 4.7.

### 4.4            Quality conformance tests -

4.4.1            Lot - Unless otherwise specified, a lot shall consist of all adhesive manufactured at one time from one batch, forming part of one contract or order, and submitted for inspection at the same time and place. No lot of adhesives shall be considered for acceptance under a contract or order, if more than 30 days have elapsed from the date on which the actual manufacturing process is completed to the date on which the batch is made available for selection of samples.

4.4.2            Sampling for test - Two containers shall be selected at random from each inspection lot. Each specimen shall be subjected to all the tests required by this specification. If either of the two specimens fail in one or more of these tests, the inspection lot shall be rejected. The contractor shall furnish all samples and shall be responsible for accomplishing the required tests.

## MIL-A-5540B

4.4.3 Visual inspection of filled containers - A random sample shall be selected from each batch in accordance with the table titled "Sample size code letters for ordinary inspection" of MIL-STD-105 at Inspection Level I and an Acceptable Quality Level (AQL) of 2.5 percent defective to verify conformance to all requirements regarding fill, components (accelerator), closure, marking, and other requirements not involving tests.

4.4.4 Tests - The quality conformance tests shall consist of those tests specified in Table II and shall be in conformance with the applicable requirements of Section 3, except as noted.

4.4.4.1 In addition, the adhesive shall be subjected to any of the other tests specified herein which the procuring activity considers necessary to determine conformance with this specification.

4.4.5 Resubmitted inspection lots - The paragraph titled "Resubmitted lots" of MIL-STD-105 shall apply. For visual inspection where the original acceptance number was zero, a sample size, represented by the next higher sample size code letter shall be chosen with the acceptance number remaining zero. For testing, three containers shall be sampled. Retest of rejected lots may be authorized by the procuring activity only if the age of the lots in question at the time they are made available for the selection of retest samples, does not exceed the above 30-day period.

TABLE II

## QUALITY CONFORMANCE TESTS

TESTS	APPLICABLE PARAGRAPH	APPLICABLE CLASSES
Viscosity As received <u>1</u> / After accelerated storage	4.7.3	1, 2, 3, 4, 5 3, 4, 5
Working life	4.7.2	1, 2, 3, 4, 5
Brushability	4.7.1	
As received		1, 2, 3, 4, 5
After accelerated storage		3, 4, 5
After working life		1, 2, 3, 4, 5
Strip adhesion, as received	4.7.5	
Coating to coating		1, 2, 3
Coating to nylon		4, 5
Dead load	4.7.6	1, 2, 3

**MIL-A-5540B**

- 1/** The quality conformance test values for all classes shall not deviate from the original "As determined" value by more than  $\pm 10$  percent for total solids,  $-20 +30$  percent for viscosity (as received), and the working life of all classes shall be a minimum of 6 hours. Example for applying tolerance on total solids: The quality conformance value of an original total solids of 8 percent is from 7.2 to 8.8 percent.

**4.5**                    Government production control tests -

**4.5.1**                Sampling instructions - Two 1-quart samples of adhesive compound shall be selected at random from each batch offered under contract. Samples shall be selected at the same time as the quality conformance test samples. The two Government production control test samples shall be furnished in containers of the type used in filling the contract or order, together with a copy of the quality conformance test results. These samples and test reports shall be forwarded to the agency indicated with the information requested as specified in 4.3.1.

**4.5.2**                If Government production control tests indicate that the batch represented does not conform to the qualification requirements of this specification, the product is subject to removal from the Qualified Products List.

**4.6**                    Test conditions -

**4.6.1**                Standard temperature of tests - Unless otherwise specified, tests shall be conducted at a temperature of  $24 \pm 3^{\circ} \text{C}$  ( $75 \pm 5^{\circ} \text{F}$ ), and relative humidity of  $50 \pm 5$  percent.

**4.6.2**                Application instructions - Test specimens shall be conditioned as follows:

- (a) Clean all surfaces to be bonded by washing three times with a cloth saturated with toluene conforming to TT-T-548. A clean lint-free cloth shall be used for each washing. Allow to dry for a minimum of 20 minutes before applying the first coat of adhesive.
- (b) Stir one-part material well. Stir two-part material (base and accelerator) well before and after combining as recommended by the manufacturer. The adhesive shall not be thinned.
- (c) For Classes 1, 2 and 4, the number of coats (not to exceed three to each surface), the application of the adhesive, the drying time between coats and drying time



before bonding shall be as specified by the manufacturer. For Classes 3 and 5, at least two and no more than three coats of adhesive shall be applied to each surface to be bonded. Allow 15 minutes drying time between each coat. Before bonding, allow the final coat to dry 15 minutes or until the film develops an aggressive tack but will no longer transfer to the knuckle.

- (d) Roll the bonded seams together by bearing down with a force of at least 25 pounds, using a 2- pound metal roller having a diameter of approximately 2 inches and a width of approximately 2 inches.
- (e) All test specimens shall be cured without application of weight or pressure. Classes 1, 2, and 4 test specimens shall be cured in accordance with the manufacturer's instructions before testing. Room temperature cures shall be at  $24 \pm 3^{\circ} \text{C}$  ( $75 \pm 5^{\circ} \text{F}$ ) and relative humidity of  $50 \pm 5$  percent. Elevated temperature cures shall be as specified by the manufacturer. After curing, Class 1 and Class 4 specimens shall be conditioned for at least 16 hours at  $24 \pm 3^{\circ} \text{C}$  ( $75 \pm 5^{\circ} \text{F}$ ) and relative humidity of  $50 \pm 5$  percent prior to testing. Curing time for Classes 2, 3, and 5 test specimens shall not exceed 7 days. Class 3 test specimens shall be cured for 7 days at  $24 \pm 3^{\circ} \text{C}$  ( $75 \pm 5^{\circ} \text{F}$ ) and relative humidity of  $50 \pm 5$  percent. All five classes shall show no evidence of sponging or blowing under curing conditions.

#### 4.7 Test methods -

4.7.1 Brushability - The adhesives stirred and mixed, as required, shall be brushed to determine conformance with the requirements specified in 3.5.1.

4.7.2 Working life - The adhesives shall be prepare accordance with the manufacturer's instructions, and allowed to stand at  $24 \pm 3^{\circ} \text{C}$  ( $75 \pm 5^{\circ} \text{F}$ ), and relative humidity of  $50 \pm 5$  percent. The adhesive shall be thoroughly stirred (for 1 minute) at 30-minute intervals and brushability determined immediately after stirring. A significant decrease in brushability shall be construed as the expiration of working life.

#### 4.7.3 Viscosity -

4.7.3.1 Apparatus - The apparatus used shall be a Brookfield

**MIL-A-5540B**

**Viscosimeter, Model No. RVF, No. 2 spindle, 20 revolutions per minute (rpm).**

**4.7.3.2 Procedure** - Viscosity determinations shall be made using a 1-quart sample of adhesive mixed in accordance with the manufacturer's instructions. Inspection results shall be obtained directly from the original quart containers used in the filling of the contract or purchase order. When adhesives are supplied under contract in containers other than round quart cans, a suitable amount of adhesive shall be transferred from its original container to a quart can conforming to PPP-C-96, Type V, Class 2, round, and viscosity shall be determined therein. The adhesive shall be at a uniform temperature of  $24 \pm 3^{\circ}\text{C}$  ( $75 \pm 5^{\circ}\text{F}$ ) during the test. The adhesive shall be thoroughly stirred to uniform consistency immediately before testing. Readings shall be taken when the pointer assumes a steady position after release of the clutch.

**4.7.4 Accelerated storage** - A 1-quart sample of Class 3 adhesive and a proportionate quantity of the accompanying accelerator in the containers used in filling contracts or orders shall be placed unopened in a circulating air oven or water bath for 7 days at  $60 \pm 1^{\circ}\text{C}$  ( $140 \pm 2^{\circ}\text{F}$ ). When adhesives are supplied under contract in containers other than round quart cans, a suitable amount of adhesive shall be transferred from its original container to a quart can conforming to PPP-C-96, Type V, Class 2, round. At the end of the storage period, the adhesive and accelerator shall be removed from the oven and cooled overnight at  $24 \pm 3^{\circ}\text{C}$  ( $75 \pm 5^{\circ}\text{F}$ ). The containers shall then be opened and the materials examined for gelling or other evidence of deterioration and tested for conformance with 3.5 and 3.5.1.

**4.7.5 Strip adhesion -**

**4.7.5.1 Preparation of test specimens** - Seams for strip adhesion shall be prepared for all classes by bonding 4- by 6-inch pieces of polychloroprene-coated nylon fabric conforming to MIL-C-19002, rubber-coated surface to rubber-coated surface, over the whole area, except for a 1-inch margin along the entire 4 inches of one end. Additional seams shall be prepared for Class 4 and Class 5 adhesives, bonded coating to nylon. Cleaning, drying time between coats and before bonding, bonding of fabric, and conditioning time shall be as specified in 4.6.2. After curing and conditioning, three 1-inch wide specimens shall be cut from the bonded fabric, discarding 1/2-inch strips from each end of the fabric. A total of 12 strip adhesion specimens shall be prepared; three specimens shall be utilized for each of the following strip adhesion tests: as received, after bond aging, after accelerated storage, and after water immersion, 4.7.5.3, 4.7.5.3.1, 4.7.4, and 4.7.5.3.2, respectively.

**4.7.5.2 Apparatus** - The apparatus shall consist of a power-driven inclined plane, pendulum, strain gage, or torsion bar-type testing machine.

## MIL-A-5540B

The capacity of the testing machine shall be such that the tension at failure shall be not more than 85 percent nor less than 15 percent of the full scale load. The machine shall be autographic. In the pendulum-type machine, the weight level shall swing as a free pendulum without engagement of pawls.

4.7.5.3 As received - The 1-inch wide strip specimens shall be held in the testing machine by grips which clamp firmly and prevent slippage at all times. The rate of travel of the power-actuated grip shall be 2 inches per minute. The specimen shall be stripped at an angle of approximately 90 degrees and the separation continued for a distance of at least 3 inches. Result shall be recorded as the average of the three specimens tested.

4.7.5.3.1 Bond aging - Bond aging specimens, prepared as specified in 4.7.5.1 shall be aged for 7 days at  $70 \pm 1^\circ \text{C}$  ( $158 \pm 2^\circ \text{F}$ ) and then allowed to remain at a temperature of  $24 \pm 3^\circ \text{C}$  ( $75 \pm 5^\circ \text{F}$ ) and relative humidity of  $50 \pm 5$  percent, for at least 16 hours prior to testing as specified in 4.7.5.3.

4.7.5.3.2 Water immersion - Water immersion specimens, prepared as specified in 4.7.5.1, shall be immersed in distilled water for 48 hours at a temperature of  $24 \pm 3^\circ \text{C}$  ( $75 \pm 5^\circ \text{F}$ ) with the 1-inch nonadhered portion of the specimen above the water level. The specimens shall be tested as specified in 4.7.5.3 within 5 minutes after removal from the water.

#### 4.7.6 Dead load -

4.7.6.1 Preparation of test specimens - The specimens shall be prepared by bonding 5- by 7-inch pieces of polychloroprene-coated nylon fabric conforming to MIL-C-19002, rubber-coated surface to rubber-coated surface, forming a 3/4-inch lap seam along the 7-inch dimension. Cleaning, drying time between coats and before bonding, bonding of fabric and conditioning time shall be as specified in 4.6.2. After curing and conditioning, three 2-inch wide specimens shall be cut from the bonded fabric, discarding 1/2-inch strips from each end of the fabric.

4.7.6.2 Procedure - The specimens as prepared in 4.7.6.1 shall be used. One end of the specimens shall be clamped firmly to a stationary member that will support the required load in a circulating air oven maintained at  $60 \pm 1^\circ \text{C}$  ( $140 \pm 2^\circ \text{F}$ ). A clamp shall be attached to the other end of the specimen and a load of 75 pounds suspended from the clamp. The load shall be supported by the specimen without evidence of seam separation or creep for 24 hours. Triplicate tests shall be conducted.

4.7 Packaging, packing, and marking - Preparation for delivery shall be inspected for conformance to Section 5.

MIL-A-5540B

## 5. PREPARATION FOR DELIVERY

### 5.1 Packaging -

\* 5.1.1 Level A - Unless otherwise specified, adhesives shall be packaged in containers in accordance with TT-P-143 in the quantities specified in the contract or order. Metal containers, 1-gallon and smaller, shall conform to Type V, Class 2 of PPP-C-96. One-gallon containers shall be provided with handles attached.

\* 5.1.2 Two-part adhesives, with base and proper quantity of separate accelerator, packaged as specified in 5.1.1, shall be kit packaged in containers conforming to Type I or II, Class 2 of PPP-B-636.

5.1.3 Level C - Adhesive shall be packaged in accordance with manufacturer's commercial practice.

### 5.2 Packing -

5.2.1 Level A - Adhesive, packaged as specified in 5.1.1 and 5.1.2, shall be packed in overseas exterior-type containers conforming to PPP-B-585, PPP-B-591, PPP-B-601, PPP-B-621, or PPP-B-636. Unless otherwise specified, containers shall be provided with a case liner conforming to MIL-L-10547 and shall be closed and sealed in accordance with appendix thereto. Case liners may be omitted in fiberboard containers, provided all seams, including manufacturer's joints, are sealed with tape conforming to PPP-T-60. The gross weight of wood or wood-cleated containers shall not exceed 200 pounds. The gross weight of fiberboard containers shall not exceed the weight limitation of the applicable container specification.

5.2.2 Level B - Adhesive, packaged as specified in 5.1.1 and 5.1.2, shall be packed in domestic exterior-type containers conforming to PPP-B-585, PPP-B-591, PPP-B-601, PPP-B-621, or PPP-B-636. The gross weight of the wood or wood-cleated containers shall not exceed 200 pounds. The gross weight of fiberboard containers shall not exceed the weight limitations of the applicable container specification.

5.2.3 Level C - The adhesive shall be packed to insure acceptance by common carrier and safe delivery to destination at the lowest applicable rate. Shipment shall comply to the Uniform Freight Classification Rules or other regulations as applicable to the mode of transportation.

5.3 Marking - Interior and exterior shipping containers shall be marked in accordance with MIL-STD-129 and as specified herein.

MIL-A-5540B

5.3.1 Interior packaging -

5.3.1.1 Base or one-part adhesive container - Each base or one-part adhesive container shall be durably and legibly marked and shall include the following information:

ADHESIVE, POLYCHLOROPRENE  
 Specification MIL-A-5540B.  
 Class                      Color  
 Manufacturer's name and address.  
 Manufacturer's product designation.  
 Batch No.  
 Volume contained.  
 Contract No. (or order number, if contract number  
     is not assigned).  
 Manufacturer's designation and batch No. of required  
     accelerator.  
 Instruction for use (see 4.3.3).  
 Date of manufacture.

Note: Classes 3, 4, and 5 adhesive should not be purchased in quantities greater than necessary for a 6-months' supply.

5.3.1.2 Accelerator container - Each accelerator container shall be durably and legibly marked with the following information:

ADHESIVE, POLYCHLOROPRENE.  
 Specification MIL-A-5540B.  
 Class.  
 Manufacturer's name and address.  
 Manufacturer's batch No.  
 Date of manufacture.  
 Volume contained.  
 Accelerator for (insert product designation for  
     base compounds).

5.3.1.3 Instructions for use - Instructions for use shall contain the following information:

- (a) For 2-part adhesives, state mixing ratio first by volume in cubic centimeters; secondly by weight in grams. State designation or code number for the proper accelerator to be used with the base adhesive.

MIL-A-5540B

## (b) Insert the following cleaning instructions:

1. "Where practicable, the material to be bonded must be cleaned at least three times, using toluene or naphtha and a clean, lint-free cloth. New cloth must be used for each cleaning."
2. "Allow sufficient evaporation of cleaning solvent before application of adhesive (20 minutes minimum for coated and uncoated fabrics, correspondingly less time for less porous materials such as glass and metal)."

## (c) State recommended number of coats to be applied.

## (d) State drying time between the initial coats and the drying time between the final coat and bonding.

## (e) State method for roll-down or application, or both, of pressure.

## (f) State recommended curing time and temperature.

## (g) Include any important data not included above in the form of a "Note" below the preceding information.

5.3.2 Exterior containers - Each exterior container shall be marked as required for interior packaging (exclusive of use instructions).

## 6. NOTES

6.1 Intended use - The polychloroprene adhesives covered by this specification are suitable where adherence to polychloroprene coated fabric is required, such as in the manufacture and repair of life vests, decoy targets, and pontoons. Classes 1, 2, and 3 adhesives, which are required to meet the dead load test, are heat stable up to 140° F, and should be used in the above applications. They are recommended for use where heat stability to 140° F is required. Since Classes 4 and 5 adhesives are not required to meet the dead load test, and their heat stability up to 140° F cannot be predicted, they should not be used in applications where heat stability to 140° F is required.

6.1.1 Classes 1, 2, and 4 adhesives should be applied in accordance with the manufacturer's instructions. Application procedures furnished the activity responsible for qualification by the manufacturer to determine conformance of approved Classes 1, 2 and 4 adhesives are available to equipment manufacturers.

MIL-A-5540B

and Government agencies. Classes 1, 2, and 4 adhesives are not intended for Government procurement or use.

6.2 Ordering data - Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Class of adhesive required (see 1.2).
- (c) Capacity of containers.
- (d) Color of adhesive required (see 3.4).
- (e) Selection of applicable levels of preservation, packaging, and packing (see 5.1 and 5.2).

6.2.1 Classes 3, 4, and 5 adhesive should not be purchased in quantities greater than necessary for a 6 months' supply.

6.3 Storage - Elevated storage temperatures shorten the usable life of these adhesives. Wherever practicable, adhesives should be stored in a cool place.

6.4 Toxicity - Questions pertinent to the effect of toxicity (see 3.6) will be referred by the procuring activity to the appropriate medical service which will act as an advisor to the procuring activity. In the case of Army procurement, the Surgeon General will act as advisor to the procuring activity.

6.5 Qualification - With respect to products requiring qualification, awards will be made only for such products as have, prior to the time set for opening of bids, been tested and approved for inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date. The attention of bidders is called to this requirement, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is the Naval Air Systems Command, Department of the Navy, Washington, D. C. 20360, however, information pertaining to qualification of products may be obtained from the Naval Air Engineering Center, Philadelphia, Pennsylvania 19112; Attention: Director, Aeronautical Materials Laboratory.

\* 6.6 Cross reference of classifications - The classes of this specification corresponding to the classes of the superseded issue are as follows:

MIL-A-5540B

<u>Current issue</u>	<u>Superseded issue</u>
Class 1	Class 1
Class 2	Class 2
Class 3	Class 3
Class 4 (Heat cure)	Class 4 (Supersedes MIL-A-005540A Interim Amendment 1 (WP) dtd 6 July 1964)
Class 5 (Room temperature)	Class 4 (Supersedes MIL-A-005540A Interim Amendment 1 (WP) dtd 6 July 1964)

- \* 6.7 Changes from previous issue - The outside margins of this document have been marked "M" to indicate where changes (deletions, additions, etc.) from the previous issue have been made. This has been done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content as written irrespective of the marginal notations and relationship to the last previous is:

**Custodians:**

Army - MR  
Navy - AS  
Air Force - 69

**Preparing activity:**

Navy - AS  
(Project No.  
8040-0146)

- \* **Review activities:**  
Army - GL, MD, MU, WC  
Navy - AS  
Air Force - 69
- \* **User activities:**  
Army - EL, MI  
Navy - MC, SH  
Air Force - 11

Review/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.



**CTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in making comments and suggestions for improvements. All users of military standardization documents are invited to provide comments. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problem. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgment will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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