NOT MEASUREMENT SENSITIVE

MIL-PRF-3420H 31 March 2008 SUPERSEDING MIL-PRF-3420G 11 September 1998

# PERFORMANCE SPECIFICATION

# WRAPPING MATERIALS, VOLATILE CORROSION INHIBITOR TREATED, OPAQUE

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

# 1. SCOPE

- 1.1 <u>Scope</u>. This specification covers wrapping materials (carriers) which have been treated either by coating or impregnating with a corrosion inhibitor.
- 1.2 <u>Classification</u>. Treated carriers are furnished in the following classes and styles. Unless a specific style of treated carrier is indicated in the contract or order, style A or B, Class 1 will be furnished (see 6.2).

#### Classes

- 1 Heavy duty
- 2 Medium duty
- 3 Light duty

# **Styles**

- A Kraft, flat: Single ply or laminated
- B Kraft, creped or embossed: Single ply or laminated
- C Greaseproof, waterproof, moldable: Laminated to carriers conforming to QQ-A-1876

Comments, suggestions, or questions on this document should be addressed to: Commander, Naval Air Warfare Center Aircraft Division, Code 41K000B120-3, Highway 547, Lakehurst, NJ 08733-5100 or emailed to <a href="michael.sikora@navy.mil">michael.sikora@navy.mil</a>. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <a href="http://assist.daps.dla.mil">http://assist.daps.dla.mil</a>.

AMSC N/A FSC 8135

# 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3 and 4 of this specification, whether or not they are listed.

# 2.2 Government documents.

2.2.1 <u>Specifications, standards and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

### DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-131 - Barrier Materials, Watervaporproof, Greaseproof, Flexible, Heat-Sealable

# DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-3010 - Test Procedures for Packaging Material

(Copies of these documents are available online at <a href="http://assist.daps.dla.mil/quicksearch/">http://assist.daps.dla.mil/quicksearch/</a> or <a href="http://assist.daps.dla.mil">http://assist.daps.dla.mil</a> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

# AMERICAN SOCIETY FOR QUALITY (ASQ)

ASQ-Z1.4 - Procedures, Sampling and Tables for Inspection by Attributes (DoD adopted)

(Copies of this document are available from <a href="www.asq.org">www.asq.org</a> or the American Society for Quality, 600 Plankinton Avenue, Milwaukee, WI 53203.)

# AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM-B152 - Copper Sheet, Strip, Plate, and Rolled Bar (DoD adopted)

ASTM-D130	-	Copper, Corrosiveness to, from Petroleum Products by the
		Copper Strip Test (DoD adopted)
ASTM-D689	-	Paper, Internal Tearing Resistance of (DoD adopted)
ASTM-D774	-	Bursting Strength of Paper (DoD adopted)
ASTM-D5486	-	Standard Specification for Pressure-Sensitive Tape for
		Packaging, Box Closure, and Sealing (DoD adopted)

(Copies of these documents are available from <a href="www.astm.org">www.astm.org</a> or ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

# 3. REQUIREMENTS

- 3.1 <u>Qualification</u>. The treated carriers furnished under this specification shall be products that are authorized by the qualifying activity for listing on the applicable qualified products list before contract award (see 4.2 and 6.3).
- 3.2 <u>Material</u>. Treated carriers shall be made from such materials and by such processes as to ensure compliance with all of the requirements of this specification. The treated carriers shall have no adverse effect on the health of personnel (see 4.2.1 and 6.3.4).
- 3.3 <u>Construction</u>. Wrapping material covered by this specification shall consist of a neutral pH carrier treated with a volatile corrosion inhibitor (VCI) in the form of a coating or an impregnation.
- 3.4 <u>Form of material</u>. The treated carrier shall be furnished in rolls or flat cut sheets as specified in the contract or delivery order (see 6.2).
- 3.4.1 Rolls. Unless otherwise specified (see 6.2), rolls shall be 36 inches wide with a tolerance of plus 1/4 inch and minus 1/8 inch. The length of roll material shall be not less than 200 yards (see 4.3.2.3). Material shall be wound evenly on roll and shall be restrained to prevent unwinding of the roll (see 4.3.2.2).
- 3.4.2 <u>Utility rolls</u>. Unless otherwise specified (see 6.2), utility rolls shall be 18 inches wide with a tolerance of plus 1/4 inch and minus 1/8 inch. The length of roll material shall be 10 yards long with a tolerance of plus 6 inches (see 4.3.2.3).
- 3.4.3 <u>Sheets</u>. Unless otherwise specified (see 6.2), flat cut sheets shall be 24 inches wide and 36 inches long. The tolerance for the length and width shall be plus 1/4 inch and minus 1/8 inch (see 4.3.2.3). Sheets shall be evenly stacked (see 4.3.2.2).

3.5 <u>Identification of material</u>. The notation DO NOT USE WITH FOODSTUFFS, specification number, class, style, manufacturer's name, manufacturer's designation, month and year of manufacture, and the notation OTHER SIDE TREATED (used when only one side has been treated) shall be clearly and legibly marked using water-resistant ink on the untreated side only. If both sides are treated, printing on either side is permissible. For material on rolls, the lines of print shall be perpendicular to the longer sides of the material as shown on figure 1. When marking is not possible due to surface conditions, tags that show the marking information as described above, except for the notation OTHER SIDE TREATED shall be used. In the case of flat units, a sheet shall be inserted in the package. Tags or sheets shall be visible upon opening the roll or package (see 4.3.2.1). The markings shall be not less that 1/8 of an inch high. The group of markings shall be repeated laterally on 10-inch centers. The distance between the bottom line of one group of markings and the top line of the next group of markings shall be not greater than 2 inches (see 4.3.2.3).

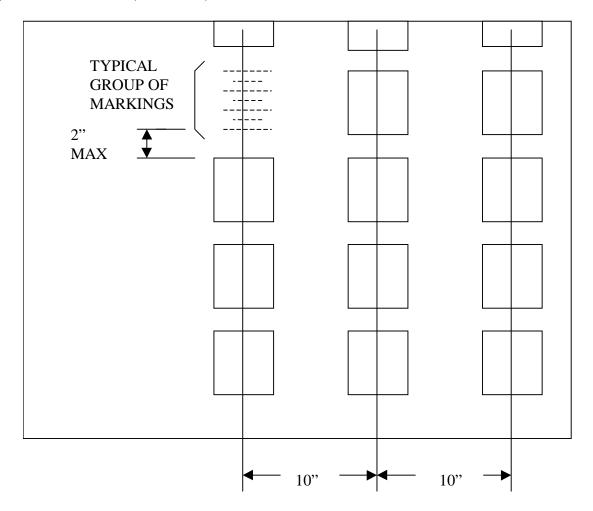


FIGURE 1. Marking of rolled wrapping materials.

3.6 <u>Performance requirements</u>. The performance of the treated carrier shall conform to the requirements specified in table I, when tested as specified in 4.5.

TABLE I. <u>Performance requirements</u>.

Characteristics	Requirements	Test Paragraph
		Reference
Vapor inhibitor ability (VIA)	No more than a total of 3 corrosion spots on 3 plugs. No corrosion spot greater than 300 microns in diameter.	4.5.1
Vapor inhibitor ability after exhaustion	No more than a total of 3 corrosion spots on 3 plugs. No corrosion spot greater than 300 microns in diameter.	4.5.1
Contact corrosivity	No corrosion, etching or pitting of contact area of panel.	4.5.1
Blocking resistance	No blocking, delamination, tearing or flaking when the sheets are separated.	4.5.1
Water resistance of markings	Markings shall be clear and legible.	4.5.1
Strength:	<u>Class 1</u> <u>Class 2</u> <u>Class 3</u>	
Bursting (psi min) 1/	60 40 20	4.5.1
Tearing, machine and cross directions (gms min)	110 40 12	4.5.1
Long term protection	No corrosion of steel panels.	4.5.2
Compatibility with copper	No pitting, etching, dark tarnish (classification 3), or corrosion (classification 4) of the vapor exposed surface. Discount attacks within 1/16 inch of specimen.	4.5.3
Compatibility with MIL-PRF-131 barrier material	No delamination, swelling, embrittlement, dissolution, effect on the sealability or deterioration of barrier material.	4.5.4

- 1/ On crepe material, bursting strength value shall be obtained with specimen stretched. Crepe requirement shall be 50 percent of flat.
- 3.7 <u>Workmanship</u>. The appearance of finished wrapping materials that are coated or impregnated shall not contain any voids in the coating or substrates (see 4.3.2.2). The material shall be clean and free from holes, tears, cuts, sharp creases, wrinkles, or other imperfections. The treated carrier shall be cut and trimmed of any selvage (see 4.3.2.1).

### 4. VERIFICATION

- 4.1 <u>Classification of inspections</u>. The inspection requirements specified herein are classified as follows:
  - a. Qualification inspection (see 4.2).
  - b. Conformance inspection (see 4.3).
- 4.2 <u>Qualification inspection</u>. The qualification inspection shall consist of all tests and examinations of this specification.
- 4.2.1 <u>Health/hazard Assessment (HHA)</u>. The wrapping shall be evaluated by the Navy Environmental Health Center (NAVENVIRHLTHCEN), using the administrative HHA (see 6.3.4).
- 4.3 <u>Conformance inspection</u>. Conformance inspections consist of the required tests listed in table II and the examinations listed in tables III through V for each production run.

TABLE II. Conformance tests.

Characteristics	Paragraph	
	Reference	
Tearing strength	4.5.1	
Vapor Inhibitor Ability	4.5.1	
Contact Corrosivity	4.5.1	
Bursting Strength	4.5.1	

- 4.3.1 <u>Sampling for conformance inspection</u>. Unless otherwise specified, sampling for inspection shall be performed in accordance with the provisions set forth in ASQ-Z1.4.
- 4.3.2 <u>Examination of the end item</u>. For the purpose of determining the sample size in accordance with ASQ-Z1.4, the lot size shall be expressed in units of rolls or packages of sheets, as applicable, for examinations under 4.3.2.1 through 4.3.2.3.
- 4.3.2.1 Examination of the end item for defects in appearance, construction, and workmanship. For examination of defects within rolls, the sample unit of product shall be two yards, the full width of the roll. For examination of sheets, the sample unit shall be two sheets randomly selected from a package. No more than five sample units, randomly selected, shall be drawn from any one roll or package of sheets, as applicable. Both sides of the wrapping material shall be examined, as specified in table III.

TABLE III. Examination of end item for defects in appearance, construction, and workmanship.

EXAMINATION	DEFECT		
(Check both sides of treated carrier.)			
Form of material	Not rolled or flat cut, as specified.		
Appearance	Surfaces not clean; presence of any foreign matter,		
	dirt, sand, grit or oil spots. (NOTE: Defects do not		
	apply to outer convolution of roll.)		
Workmanship	Delamination.		
	Embrittlement.		
	Any hole (excluding optical pinholes), tear, cut,		
	chafed spot or scuff mark. (Note: Defects do not		
	apply to outer convolution of roll.)		
	Edges not clean cut; ragged, crushed or uneven.		
Construction	Not uniform.		
	Any layer or section missing.		
Identification of material (marking)	Markings not made using water resistant ink.		
	Missing, incorrect, or illegible.		
	Not on backing surface where required.		
	Complete marking not repeated as specified in 3.5.		
	For roll material the lines of print not perpendicular		
	to the longer sides of material.		
	Tags or sheets, when applicable, not properly		
	located.		

- 4.3.2.2 <u>Examination of the end item for defects in general construction</u>. The sample unit for this examination shall be one roll or one package of sheets, as applicable.
- 4.3.2.3 <u>Examination of the end item for dimensional defects</u>. The sample unit for this examination shall be one roll or one package of sheets, as applicable.
  - 4.4 <u>Test conditions and preparation</u>.
- 4.4.1 <u>Test conditions</u>. Unless otherwise specified in the detailed test method herein, the physical tests contained in this specification shall be made with an atmosphere having a relative humidity of  $50 \pm 5$  percent and a temperature ranging from 70 to 76°F (21 to 25°C). Material shall be considered in equilibrium after exposure to the above conditions for a minimum of 24 hours.

TABLE IV. Examination of end item for defects in general construction.

EXAMINATION	DEFECT		
Roll or package sheets	Loss of coating or impregnation causing bald		
	spots.		
	Coating or impregnation completely missing.		
	Granular sandpaper surface.		
Assembly of sheets	Not evenly and uniformly stacked; sheet		
	containing manufacturer's sealing conditions not		
	visible upon opening. Adjacent sheets stick		
	together to the extent that separation causes		
	tearing or injury to any surface.		
Assembly of roll	Not restrained to prevent unwinding.		
	Material not wound uniformly on roll causing		
	soft or uneven edges, or telescoping of roll.		
Unwinding of roll (check both	When unwound, material sticks together to the		
sides)	extent that unrolling causes tearing or injury to		
	any surface.		
	Material wound unevenly causing wrinkles,		
	sharp creases, or folds within roll.		

TABLE V. Examination of the end item for dimensional defects.

EXAMINATION	DEFECT		
Sheets			
Length and Width	Varies by more than plus 1/4 or minus 1/8 inch		
	from dimensions specified.		
Rolls:			
Width	Varies by more than plus 1/4 inch or minus 1/8		
	inch from the dimensions specified.		
Length	Less than 200 yards.		
Utility rolls:			
Width	Varies by more than plus 1/4 inch or minus 1/8		
	inch from the dimensions specified.		
Length	Less than 10 yards or greater than 10 1/6 yards.		
Identification markings	Lettering is less than 1/8 inch high. More than 2		
	inches between groups of markings. Less than		
	one group of markings in each 10 inches of		
	width.		

- 4.5 Verification of performance requirements.
- 4.5.1 <u>Test methods</u>. Unless otherwise specified, the tests in table VI shall be conducted in accordance with the identified methods.

TABLE VI. Test methods.

	MIL-STD-3010	ASTM	Special
Tests	Test	Test	Requirement or
	Method No.	Method No.	Exception Note
Vapor inhibitor ability	4031		
	procedure B		<u>1</u> /
Vapor inhibitor ability (after	4031		
exhaustion)	procedure B		<u>1</u> /
Blocking resistance	3003		<u>2</u> /
Contact corrosivity	3005		
Bursting strength		D774	
Water resistance of marking	3027		
Tearing strength		D689	

- $\underline{1}$ / The following apply to the VIA and VIA after exhaustion tests:
- a. The apparatus used for these procedures shall be cleaned in a solution of hot water and detergent, followed by thorough rinsing in hot tap water.
  - b. Four specimens shall be tested.
- c. After immersion cleaning in methanol, each specimen be allowed to dry for 30 seconds in a draft free area, with the test surface in a vertical position.
- d. Immediately after insertion into the VIA test apparatus, each specimen shall be blown free of dust using a short burst from a self pressurized can of 1,1,1,2 tetrafluoroethane.
- e. After eliminating the plug with the most corrosion spots, the remaining three plugs shall meet the requirement in table I.
- 2/ (Style C materials shall be tested in a face-to-back configuration only.) Samples shall be tested at both room temperature and 160 °F.

# 4.5.2 Long term protection test.

4.5.2.1 <u>Preparation of panels</u>. Four 2 by 4 by 1/8 inch, cold rolled SAE1010 steel panels, with rounded edges shall be finished and cleaned as specified in the contact corrosivity test (see 4.5.1). Two 1/8 inch diameter holes shall be drilled at opposite corners of a 4 inch side.

# 4.5.2.2 Procedure.

4.5.2.2.1 <u>Assembly of box</u>. A new weather-resistant fiberboard box 12 x 12 x 12 inch inside dimension shall be assembled with the top remaining open. The seams on the bottom of the box shall be sealed with 3 strips of 3 inch wide tape conforming to ASTM-D5486, Type I. The inner walls, except the top, shall be lined with a single layer of wrapping material, treated side facing the center of the box.

# 4.5.2.3 <u>Placement of panels in box</u>.

- 4.5.2.3.1 <u>Panel number 1</u>. Panel 1 shall be centered on a 6 x 6 inch piece of wrapping material sheet. The sheet shall be tightly wrapped around the short dimension of the panel and fastened with a double fold at the middle of the panel face; a single fold of the sheet shall be made at the ends of the panel. The wrapped panel shall be placed in the prepared box with the folds of the sheet against the bottom of the box and secured with nylon thread.
- 4.5.2.3.2 <u>Panel number 2</u>. A stainless steel or nickel-chromium alloy wire shall be attached to each of the two 1/8 inch holes in panel 2, then each wire attached to opposite sides of the top of the box in such a way as to center the panel at the center of the box.
- 4.5.2.3.3 <u>Panels 3 and 4</u>. Repeat the procedure for panel 2 except that these panels shall be suspended at the same level and parallel to panel 2, and at least one inch from panel 1 and the sides of the box.
- 4.5.2.4 <u>Box closure and exposure</u>. Close the box and seal the top as specified in 4.5.2.2.1. The tape applied over the center lengthwise seams shall extend at least 3 inches onto each of the end panels. The manufacturer's joint shall be taped to establish a completely sealed container. The sealed box shall be exposed outdoors for 12 months in a louvered shed. Upon completion of the exposure period, the panels shall be examined visually for conformance to the requirements in table I.

# 4.5.3 Compatibility with copper.

4.5.3.1 Preparation of test assembly panel. Three panels of cold rolled, hard temper copper conforming to ASTM-B152/B152M and measuring 1/16 by ½ by 3 inches shall be polished to remove pits and irregularities from all surfaces. The panels shall be polished with 240 grit aluminum oxide. The use of "wet or dry" paper is prohibited. Iron oxide abrasives shall not be used. The final abrasion shall be in a direction parallel to the length of the panel. Each panel shall be bent into a "U" shape having a radius of ¼-inch and a distance of ½-inch between side walls at the ends. The U-shaped panel shall be wiped clean using laboratory tissue dampened with methanol. A sample of wrapping material measuring ¾ by 3½ inches shall be tightly wrapped around each "U" shaped panel with the treated side in contact with the copper, so that the material is perpendicular to the longitudinal axis and at the base of the open section of the "U". The wrapping material shall be secured with nylon thread.

- 4.5.3.2 Procedure. Fifty ml of a solution of glycerine and distilled water having a specific gravity of 1.103 at  $75 \pm 3$  °F shall be poured into a wide-mouth glass jar of one pint capacity to provide a relative humidity of  $85 \pm 3$  percent at  $150 \pm 2$  °F. A glass vessel for use as a stage shall be inverted and placed inside the jar. The three wrapped panels shall be placed around the perimeter of the stage with both legs of the inverted "U" resting on the stage in the test jar avoiding contact with glycerine solution. The test jar shall be sealed with a screw cap using an aluminum foil gasket and placed in a circulating air oven at  $150 \pm 2$  °F for 7 days. The test jar shall then be removed from the oven, allowed to cool, and the copper panels removed and unwrapped. The "U" shaped specimen shall be visually examined on the inside surface of the "U" for evidence of corrosive effects from the vapor in accordance with ASTM-D130.
- 4.5.4 <u>Compatibility with MIL-PRF-131</u>. For VCI-treated sheet materials. The test shall be performed as follows in triplicate for each combination of materials along with a control incorporating neutral kraft paper in lieu of VCI-treated material.
- 4.5.4.1 <u>Assembly of specimens</u>. The specimen of MIL-PRF-131 barrier material shall be formed into a pouch by folding the specimen in half and leaving a 36-pound flat surfaced weight on the crease for 30 seconds (6 pounds per inch of crease). The short edges shall be sealed to form a side-opening pouch 5 inches long. A clean dry steel panel 1/8 by 2 by 4 inches shall be wrapped in a specimen of VCI-treated material with the treated surface toward the panel. The wrapping shall be closed with a double fold along the lengthwise centerline of the panel, and single folds at the ends of the panel. The wrapped panel shall then be inserted into the pouch. The excess air shall be pressed out by hand and the pouch closed with an airtight heat seal.
- 4.5.4.2 <u>Procedure</u>. Unless otherwise specified, the assembly shall be retained in an oven maintained at  $150 \pm 2$  °F for 7 days. When the pouch has cooled to room temperature, the sealed edge shall be cut away and the wrapped panel shall be removed. The MIL-PRF-131 barrier material shall be examined for deterioration and if none is obvious, the material shall be tested by bending it with the heat-seal face out around a 1/4-inch-diameter mandrel as prescribed in MIL-STD-3010, Method 2003.

# 5. PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or inhouse contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

### 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

- 6.1 Intended use. The treated carriers covered by this specification are intended for use in specialized military methods of preservation. The combination of all performance characteristics of MIL-PRF-3420; vapor inhibitor ability; vapor inhibitor ability after exhaustion; long term protection; contact corrosivity; blocking resistance; water resistance of markings provide the necessary requirements for protection from exposure to the extremes of the navy/naval aviation environment. Navy/naval aviation items are exposed to high moisture, high salt concentration, transfer at sea, rough handling, and minimal storage conditions. There are no commercial equivalents that meet the physical, mechanical, and corrosion requirements necessary to protect material that are exposed to the operational naval aviation environment. MIL-STD-2073-1 uses MIL-PRF-3420 as the premier source of wrapping material coated or impregnated with a volatile corrosion inhibitor that provides protection for applicable items encountering the above conditions. MIL-PRF-3420 provides the building blocks for applying specialized military preservation techniques approved under MIL-STD-2073-1.
- 6.1.1 End use required compatibility testing. Materials may not be used to package assemblies containing plastic, painted, or rubber components, unless the specific inhibitor has passed the compatibility test specified in MIL-I-8574. Additionally, VCI materials should not be used in applications where they might come in contact with high explosives or propellants associated with ammunition. Procedures covering the use of VCI materials are specified in MIL-I-8574.
  - 6.2 <u>Acquisition requirements</u>. Acquisition documents should specify the following:
  - a. Title, number, and date of the specification.
  - b. Class and style of treated carrier (see 1.2).
  - c. Form (rolls or flat cut sheets) and size required (see 3.4).
  - d. Utility rolls (specify quantity).
  - e. Packaging requirements (see 5.1).
- 6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List QPL-3420 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, 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 purchase orders for the products covered by this specification. Information pertaining to qualification of products and

the letter of authorization for submittal of sample may be obtained from: Commander, Naval Air Warfare Center Aircraft Division, Code 6.7.2.2, Building 562-3, Room 134, Highway 547, Lakehurst, NJ 08733-5049.

Carrier material supplied under contract should be identical in every respect to the samples tested and found to meet the requirements of this specification. Any unapproved changes from the qualification sample should constitute cause for rejection for material submitted and for removal from the list of qualified products. However, acceptability under this specification is based on the performance characteristics of the barrier material, and since there is no color requirement, it is not mandatory that the color of the visible surfaces of the material supplied under contract be the same as the samples tested and accepted by the qualifying activity.

6.3.1 <u>Submission of qualification samples</u>. Prior to submitting samples for qualification testing, manufacturers must request authorization from the qualifying activity. Upon receipt of authorization, samples are to be forwarded as directed by the qualifying activity. The samples should be plainly and durably marked with the following information:

Sample for Qualification Inspection

# WRAPPING MATERIALS, VOLATILE CORROSION INHIBITOR TREATED, OPAQUE

Manufacturer's Name

Manufacturer's Code No.

Class

Style

Date of manufacture (month and year)

Submitted by (name) (date) for qualification inspection in accordance with requirements of MIL-PRF-3420H under authorization (reference authorizing letter)

- 6.3.2 <u>Submitted samples</u>. The qualification inspection sample should be considered representative of the manufacturer's entire line of treated carriers; however, where the following modifications have been made, additional qualification samples as specified in 6.3.1 should be submitted.
  - a. Change in quantity or type of corrosion inhibitor.
  - b. Change in method of treatment, such as impregnation to coating or vice versa.
  - c. Change in binder.
- d. Change to a different basic carrier other than kraft paper, such as direct application to foil, plastic, or other carrier material.

- 6.3.3 <u>Additional information required</u>. In addition to the qualification sample, the manufacturer will furnish the following to the qualification activity:
  - a. One copy of the product MSDS (see 6.5).
  - b. A certified test report showing the product conforms to all of the requirements of this specification.
- 6.3.4 Health/hazard assessment (HHA). The qualifying activity will request the Navy Environmental Health Center (NAVENVIRHLTHCEN) to perform an HHA on the barrier material furnished. Prior to listing on the Qualified Products List, the results of the NAVENVIRHLTHCEN HHA must be deemed acceptable by the qualifying activity. A flowchart for the HHA process can be found as enclosure (1) of BUMEDINST 6270.8. The HHA is a review of the product based on information submitted by the manufacturer, to assess health hazards associated with the handling, application, use and removal of the product. Sufficient data to permit an HHA of the product is to be provided by the manufacturer to the Commanding Officer, Navy Environmental Health Center, ATTN: Hazardous Materials Department, Industrial Hygiene Directorate, 620 John Paul Jones Circle, Suite 1100, Portsmouth, VA 20378-2103.
- 6.4 <u>Conformance inspection lot</u>. For purposes of sampling, an inspection lot for examinations and tests should consist of all material of the same class made by the same process from the same components by one manufacturer during one production run.
- 6.5 <u>Material Safety Data Sheets (MSDSs)</u>. Contracting officers will identify those activities requiring copies of completed Material Safety Data Sheets prepared in accordance with FED-STD-313. The pertinent Government mailing addresses for submission of data are listed in FED-STD-313; and 29 CFR 1910.1200 requires that the Material Safety Data Sheet for each hazardous chemical used in an operation must be readily available to personnel using the material. Contracting officers will identify the activities requiring copies of the Material Safety Data Sheet.
  - 6.6 Subject term (key word) listing.

Greaseproof
Preservation
Treated carriers
Vapor phase inhibitor

6.7 <u>Changes from previous issue</u>. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

# **CONCLUDING MATERIAL**

Custodians:

Army - SM

Navy - AS

Air Force -11

Preparing activity:

Navy - AS

(Project 8135-2007-003)

Review activities:

Army - AT, AV, EA

Navy - MC, OS, SA, SH, YD

DLA - DH

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="http://assist.daps.dla.mil/">http://assist.daps.dla.mil/</a>.