

INCH-POUND

MIL-P-47215B (MI)

9 December 1992

SUPERSEDING

MIL-P-47215A (MI)

30 March 1987

## MILITARY SPECIFICATION

### PRIMER, ABLATIVE RESISTANT COATING

This specification is approved for use by the U.S. Army Missile Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification covers the requirements for a room-temperature-drying primer used as a metal treatment in conjunction with ablative resistant coating.

#### 2. APPLICABLE DOCUMENTS

##### 2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. 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 listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Missile Command, ATTN: AMSMI-RD-SE-TD-ST, Redstone Arsenal, AL 35898-5270 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8030

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## SPECIFICATIONS

## FEDERAL

PPP-B-585	-	Boxes, Wood, Wireboard
PPP-B-601	-	Boxes, Wood, Cleated-Plywood
PPP-B-621	-	Boxes, Wood, Nailed and Lock-Corner
PPP-B-636	-	Boxes, Shipping, Fiberboard
QQ-S-781	-	Strapping, Steel, and Seals

## MILITARY

MIL-P-116	-	Preservation, Methods of
MIL-C-47244	-	Coating, Ablative Resistant

## STANDARDS

## FEDERAL

FED-STD-141	-	Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling and Testing
FED-STD-313	-	Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials

## MILITARY

MIL-STD-129	-	Marking for Shipment and Storage
MIL-STD-147	-	Palletized Unit Loads
MIL-STD-1190	-	Minimum Guidelines for Level C Preservation, Packing and Marking

(Unless otherwise indicated, copies of the federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Ave., Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS

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cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2)

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 70 - pH of Aqueous Solutions with the Glass Electrode,  
Standard Test Method for

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

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 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 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Material. The material shall be a room-temperature-drying primer for application to metals to obtain maximum adhesion with ablative resistant coating conforming to MIL-C-47244.

3.3 Physical properties.

3.3.1 Appearance. The primer shall be free of lumps, jelled or cloudy areas, or flocculent precipitate and shall show no evidence of separation that cannot be readily dispersed. The primer shall have a translucent red color.

3.3.2 Viscosity. The viscosity shall be not greater than 1000 centipoises (cP) at  $25 \pm 3^\circ$  Celsius (C).

3.3.3 Alkalinity. The primer shall have a pH value of not less than 7.5 nor greater than 9.5.

3.3.4 Shelf life. The shelf life of the primer shall be not less than 6 months from the date of manufacture when stored in original unopened containers at a temperature less than  $27^\circ\text{C}$ .

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3.4 Workmanship. The workmanship shall be such as to ensure a product which is uniform, in conformance with this specification, and properly packaged and packed. The primer shall be free of dirt, foreign material, or other contamination. Containers shall be clean, uniformly filled, well sealed, and legibly and durably marked.

3.5 Material safety data sheets. A material safety data sheet shall be prepared in accordance with the requirements of FED-STD-313 (see 6.5).

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection. First article inspection shall be conducted only on the first article sample and shall consist of all the examinations and tests specified herein.

4.4 Quality conformance inspection. Quality conformance inspection for acceptance of primer shall be as specified in table I.

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TABLE I. Quality conformance inspection.

Inspection	Requirement paragraph	Test paragraph
First article	3.1	4.3
Material	3.2	4.6
Appearance	3.3.1	4.10.1.1
Viscosity	3.3.2	4.10.1.2
Alkalinity	3.3.3	4.10.1.3
Shelf life	3.3.4	4.10.1.4
Workmanship	3.4	4.12

4.5 Lot size. Lot size shall consist of all the primer submitted for acceptance at the same time which has been prepared by the same company without a change in materials or processes in one continuous period of operation.

4.6 Sampling of material. Unless otherwise specified (see 6.2), 0.5 pint of primer from one unit representative of each lot shall be selected at random for quality conformance inspection. Each packaged container shall be considered as a unit of product. Failure of the sample to meet the quality conformance requirements shall be cause for lot rejection.

4.7 First article sample. The first article sample shall be prepared using the same methods proposed for the preparation of subsequent production lots of primer.

4.8 Inspection routine. Samples of the primer shall be subjected to all examinations and tests specified herein.

4.9 Failures. First article samples which do not meet the requirements of this specification shall be subjected to rejection. Subsequent quantities will not be considered for acceptance until approval of the first article sample has been obtained.

#### 4.10 Test methods.

##### 4.10.1 Physical property tests.

4.10.1.1 Appearance. The appearance of the primer shall be checked visually. Appearance shall be as specified in 3.3.1.

4.10.1.2 Viscosity. The viscosity shall be determined in accordance with FED-STD-141, Method 4287, using a number 2 spindle at 2 revolutions per minute (rpm). The viscosity shall be as specified in 3.3.2.

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4.10.1.3 Alkalinity. The alkalinity of the primer shall be determined in accordance with ASTM E 70. The alkalinity shall be specified in 3.3.3.

4.10.1.4 Shelf life. The primer shall be tested for compliance with all the requirements specified herein after completion of storage period. The manufacturer's certificate of compliance with the shelf life requirement (see 3.3.4) may be accepted during the storage period.

4.11 Inspection of packaging. Except when commercial packaging is specified, the sampling and inspection of the preservation and interior package marking shall be in accordance with groups A and B quality conformance inspection requirements of MIL-P-116. The sampling and inspection of the packing for shipment and storage shall be in accordance with the quality assurance provisions of the applicable container specification shown in section 5. The inspection of marking for shipment and storage shall be in accordance with MIL-STD-129. The inspection of commercial packaging shall be as specified in the contract (see 6.2).

4.12 Examinations. The material shall be visually examined to assure conformance to the workmanship requirement specified in 3.4.

## 5. PACKAGING

5.1 Preservation. Preservation shall be level A or C as specified (see 6.2).

### 5.1.1 Level A.

5.1.1.1 Unit packs. Unless otherwise specified (see 6.2), each item shall be individually unit packed in accordance with method III of MIL-P-116.

5.1.1.2 Intermediate packing. Items unit packed as specified in 5.1.1.1, shall be placed in intermediate containers conforming to PPP-B-636, class weather-resistant. Intermediate containers shall be uniform in size, shape, and quantities, shall be of minimum tare and cube and shall contain multiples of five unit packs of not greater than 100 unit packs. No intermediate packs are required when the total quantity shipped to a single destination is less than 100 unit packs.

5.1.2 Level C. The industrial preservation shall be in accordance with the requirements of MIL-STD-1190.

5.2 Packing. Packing shall be Level A, B or C as specified (see 6.2).

5.2.1 Level A. The packaged items shall be packed in containers conforming to PPP-B-601, overseas type; PPP-B-621, Class 2, style 4 or PPP-B-585, Class 3, style 2 or 3. Closure and strapping shall be in accordance with applicable container specifications except the strapping shall conform to QQ-S-781, type I or IV, finish A.

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When the gross weight is greater than 200 pounds or the container length and width is greater than 48 inches by 24 inches and the weight is greater than 100 pounds, 3 inch by 4 inch skids (laid flat) shall be applied in accordance with requirements of the container specifications PPP-B-585 and PPP-B-601.

5.2.2 Level B. The level B packaged items shall be packed in fiberboard containers, conforming to PPP-B-636, class weather resistant. Closures shall be in accordance with the appendix thereto.

5.2.3 Level C. The level C packaged items shall be packed in accordance with requirements of MIL-STD-1190.

5.2.4 Unitized loads. Unitized loads, commensurate with the level of packing specified in the contract or order, shall be used whenever total quantities for shipment to one destination equal 40 cubic feet or more. Quantities less than 40 cubic feet need not be unitized. Unitized loads shall be uniform in size and quantities to the greatest extent practicable.

5.2.4.1 Level A. Items, packed as specified in 5.2.1, shall be unitized on pallets in conformance with MIL-STD-147, load type I, with fiberboard cap (storage aid 4) positioned over the load.

5.2.4.2 Level B. Items, packed as specified in 5.2.2, shall be unitized as specified in 5.2.4.1 except that the fiberboard caps shall be class domestic.

### 5.3 Marking.

5.3.1 Levels A and B. In addition to any special or other identification marking required by the contract (see 6.2), each unit pack, intermediate and exterior container and unitized load shall be marked in accordance with MIL-STD-129.

5.3.2 Level C. Industrial marking shall be in accordance with the requirements of MIL-STD-1190.

### 5.4 General.

5.4.1 Exterior container. Exterior containers (see 5.2.1, 5.2.2 and 5.2.3) shall be of a minimum tare and cube consistent with the protection required and shall contain equal quantities of identical stock numbered items to the greatest extent practicable.

## 6. NOTES

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

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6.1 Intended use. The primer covered by this specification is used to obtain maximum adhesion when a high viscosity epoxy resin system conforming to MIL-C-47244 is applied to metal. The primer may be applied by dipping, spraying, or by wiping with a lint free cellulose pad.

6.2 Acquisition requirements. Acquisition documents must specify the following:

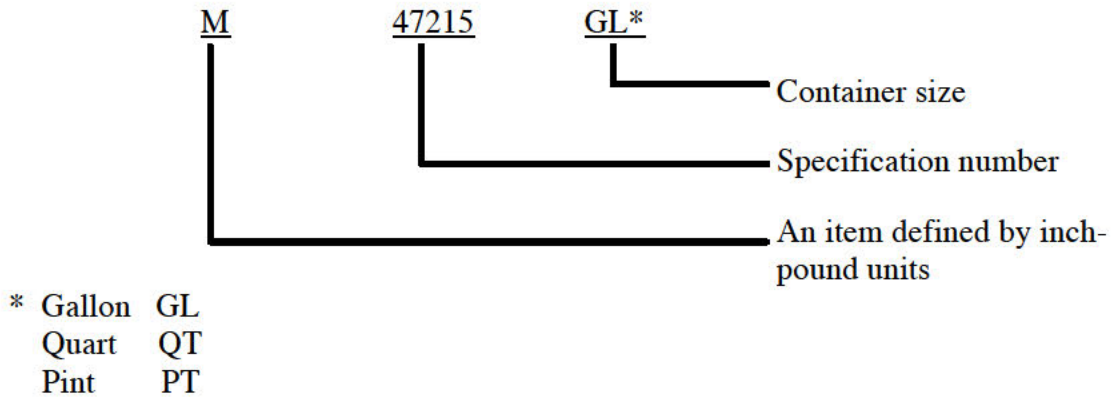
- a. Title, number, and date of the specification
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1)
- c. Military part number (see 6.4)
- d. Whether a first article is required and, if so, pertinent details (see 3.1 and 4.2)
- e. Conditions for quality conformance (see 4.4)
- f. Sampling plan if other than specified (see 4.6)
- g. Manufacturer's certificate of compliance for shelf life requirement (see 4.10.1.4)
- h. Requirements for preservation, packaging, packing and marking, if different (see 5.1).

6.3 First article. When first article inspection is required, the contracting officer should provide specific guidance to offerers whether the item(s) should be a first article sample, a first production item, or a number of items to be tested as specified in 4.3. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, approval of first article test results and disposition of first articles. Invitations for bids should provide that the government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 Military part number. The military part number shall consist of the letter D, the basic number of this specification, and dash designators denoting container size.



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6.5 Metricalion. Metric equivalents in accordance with FED-STD-376 are acceptable for use in this specification.

6.6 Material safety data sheets. 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.

6.7 Subject term (keyword) listing.

Corrosion inhibitor  
 Epoxy resin  
 Lacquer  
 Paint

6.6 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:  
 Army - MI

Preparing Activity:  
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