

MIL-I-22590C  
29 August 1986  
SUPERSEDING  
MIL-I-22590B  
15 September 1964

## MILITARY SPECIFICATION

### IMPREGNATED WADDING, METAL POLISH

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

#### 1. SCOPE

1.1 Scope. This specification covers the requirements for a metal polish impregnated wadding intended for polishing heavily oxidized aluminum surfaces.

#### 2. APPLICABLE DOCUMENTS

##### 2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

#### SPECIFICATIONS

##### FEDERAL

QQ-A-250/5 - Aluminum Alloy Alclad 2024, Plate and Sheet.  
QQ-A-250/13 - Aluminum Alloy Alclad 7075, Plate and Sheet.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Systems Engineering and Standardization Department (Code 93), Naval Air Engineering Center, Lakehurst, NJ 08733-5100, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 7920

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## SPECIFICATIONS - continued

- QQ-C-576 - Copper Flat Products With Slit, Slit and Edge-rolled, Sheared, Sawed or Machined Edges, (Plate, Bar, Sheet and Strip).
- TT-T-291 - Thinner, Paint, Mineral Spirits, Regular and Odorless.
- CCC-C-458 - Cloth, Flannel, Cotton.
- DDD-C-441 - Cloth, Polishing.
- DDD-R-30 - Rag, Wiping, Cotton and Cotton Synthetic.
- PPP-B-636 - Box, Shipping, Fiberboard.
- PPP-C-96 - Cans, Metal, 28 Gage and Lighter.

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- MIL-S-7952 - Steel, Sheet and Strip, Uncoated, Carbon (1020 and 1025)(Aircraft Quality).
- MIL-A-8625 - Anodic Coatings, for Aluminum and Aluminum Alloys.
- MIL-T-21595 - Tape, Pressure Sensitive Adhesive, Masking, Non-Staining, For Aircraft Painting Applications.

## STANDARDS

## FEDERAL

- FED-STD-141 - Paint, Varnish, Lacquer and Related Materials, Methods of Inspection, Sampling and Testing.
- FED-STD-313 - Material Safety Data Sheets, Preparation and Submission of.

## MILITARY

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

(Copies of specifications and standards required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

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3.5 Ease of removal and corrosiveness. The polished test panels of aluminum clad alloy, copper, and steel shall show no discoloration or any other evidence of corrosion when tested as specified in 4.5.4.

3.6 Effect on painted surfaces. The impregnated wadding shall not cause softening, discoloration, or dulling of aircraft lacquers and shall not cause a decrease of surface hardness greater than one pencil hardness when tested as specified in 4.5.5.

3.7 Attack on acrylic base plastics. The impregnated wadding shall not cause crazing, cracking, or other attack on acrylic-base plastics under stress when tested as specified in 4.5.6.

3.8 Abrasive number. The abrasive number shall be not greater than 6 when the impregnated wadding is tested as specified in 4.5.7.

3.9 Drying time. The impregnated wadding shall produce a film, on clad aluminum alloy, which dries within 10 minutes when tested as specified in 4.5.8.

3.10 Polishing ability. The impregnated wadding shall produce a reflectance equal to or better than that produced by the control formula product similarly tested when specified in 4.5.9.

3.11 Retention of reflectance. A polished test panel shall retain not less than 95 percent of its original reflectance when tested as specified in 4.5.10.

3.12 Stability. The impregnated wadding shall show no evidence or separation of solvent or powder when tested as specified in 4.5.11.

3.13 Flash Point (of solvent ingredient). The flash point of the solvent ingredient shall be not less than 55.6°C (130° F) when tested as specified in 4.5.12.

3.14 Workmanship. The impregnated wadding ingredients shall be intimately assembled and of the high quality material necessary to meet the requirements of this specification.

#### 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 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM D 3951 - Commercial Packaging.
- ASTM F 484 - Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds, Test Method for.

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

(Nongovernment standards and other publications are normally available from the organizations which prepare or which 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 specification and the references cited herein (except for associated detail specifications, specification sheets or MS standards), the text of this specification shall take precedence. Nothing in this specification, however shall supersede applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

3.1 First article. When specified in the contract or purchase order, a sample shall be subject to first article inspection (see 4.3 and 6.3).

3.2 Composition. The composition of the impregnated wadding shall be optional with the manufacturer, but shall be restricted by the requirements specified herein.

3.2.1 Non-volatile content. The non-volatile content of the impregnated wadding shall be between 35 and 45 percent by weight when tested as specified in 4.5.1.

3.2.2 Ash content. The ash content of the impregnated wadding shall be between 8 and 12 percent by weight when tested as specified in 4.5.2.

3.3 Toxicity. The impregnated wadding shall have no adverse effect on the health of personnel when used for its intended purpose. Questions pertinent to this effect shall be referred by the acquiring activity to the appropriate medical service who will act as advisor to the acquiring activity. The manufacturer shall certify that the impregnated wadding contains no substance known to be toxic to the user under normal conditions of use. Material safety data sheets shall be prepared and submitted in accordance with FED-STD-313.

3.4 Volatility. The volatility of the impregnated wadding shall be equal to or less than that of distilled water when tested as specified in 4.5.3.

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4.1.1 Responsibility for compliance. All items must 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.2 Classification of inspection. 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. The first article inspection of the wadding shall consist of tests and examinations for all the requirements of this specification.

4.3.1 First article samples. Unless otherwise specified, as soon as practicable after the award of the contract or order, the contractor shall submit four two pound samples of the wadding. The samples shall be representative of the construction, workmanship, components and materials to be used during production. When a contractor is in continuous production of the wadding from contract to contract, submission of further first article inspection samples, on the new contract, may be waived at the discretion of the acquiring activity (see 6.2.1). Approval of the first article inspection samples or the waiving of the first article inspection does not waive the requirements of performing the quality conformance inspection. The first article inspection samples shall be furnished to the Government as directed by the contracting officer (see 6.2.1). The first article inspection sample shall be identified by securely attached tags or labels durably marked with the following information:

Sample for First Article Inspection  
 IMPREGNATED WADDING, METAL POLISH  
 Name of manufacturer  
 Name of distributor (if applicable)  
 Product designation (manufacturer's)  
 Date of manufacture  
 Submitted by (name)(date) for first article inspection in  
 accordance with the requirements of MIL-I-22590C.

4.3.2 Test report. Two copies of the contractor's test report, containing complete test data for the end item and for each component required herein and referring specifically to the applicable paragraphs, shall be submitted with the first article inspection sample.

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4.4.1 Lot formation. A lot shall be defined as the end product of all raw materials mixed or blended in one operation.

4.4.2 Sampling and examination.

4.4.2.1 Examination for defects in appearance. The sample unit for this examination shall be one filled primary container. The inspection levels and the acceptable quality levels (AQL) are as listed in Table I. Examinations shall be as specified in Table II.

TABLE I. Inspection levels and acceptable quality levels (AQLs).

Examination Paragraph	Inspection Level	AQL
4.4.2.1	S-4	2.5
4.4.2.2	S-4	6.5
4.4.2.3	S-2	*
4.4.2.4	S-2	4.0

\* Containers with less than specified weight shall be replaced at time of inspection.

TABLE II. Examination for defects in appearance.

Examine	Defect
Appearance	Wadding not impregnated, hard or dry. Wadding not clean, not free of foreign materials or imbedded particles. Wadding loose or difficult to separate into usable wads. Excessive impregnant.

4.4.2.2 Examination for defects in materials and construction. The sample unit for this examination shall be one primary container. The inspection level and AQL are as listed in Table I. Examination shall be as specified in Table III.

TABLE III. Examination for defects in materials and construction.

Examine	Defects
Appearance	Dents, holes, bulged or distorted. Lid missing.
Construction	Not material specified, or size specified.

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4.4.2.3 Examination of the primary container for weight of wadding. The sample unit shall be one primary container. A minimum of ten sample units of each size shall be examined and the average weight per primary container shall not be less than the indicated or specified weight. The inspection levels and (AQL) are as listed in Table I.

4.4.2.4 Examination of preparation for delivery. An examination shall be made to determine that the packaging, packing and marking shall comply with the requirements set forth in Table IV and Section 5. The sample unit 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. The inspection levels and AQL are as listed in Table I.

TABLE IV. Packaging inspection.

Examine	Defect
Intermediate packaging	Not material, construction or closure as specified.
Packing	Not level specified. Container damaged or packing otherwise damaged, affecting serviceability. Any component non-conforming, damaged, or missing.
Count	Number of intermediate containers not as indicated, specified or required by contract.
Markings	Interior or exterior markings, as applicable, omitted, illegible, incorrect or not in accordance with contract requirements.

4.4.2.5 Quality conformance test samples. The quality conformance test samples shall consist of two two-pound samples of impregnated wadding taken at random from each lot.

4.5 Test and inspection method conditions. Examinations and tests shall be performed at temperature and humidity conditions as specified in FED-STD-141. Unless otherwise specified, the values specified in Section 3 apply to the average of the determinations made on the unit of product.

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4.5.1 Non-volatile content. A representative portion of the sample, weighing approximately 10 grams, shall be accurately weighed and placed in a weighed porcelain crucible. The crucible shall be heated on a steam bath for 45 minutes and then in an oven at  $105 \pm 2^\circ \text{C}$  ( $221 \pm 4^\circ \text{F}$ ) for 2 hours cooled, and weighed. The percentage of non-volatile matter shall be calculated as follows:

$$\frac{A-B}{A} \times 100 = \% \text{ non-volatile matter}$$

A = weight of original

B = weight of sample left in crucible

4.5.2 Ash content. The crucible containing the non-volatile matter shall be heated, using only moderate heat until all the organic matter is burned off. The crucible shall then be cooled and weighed. The percentage of ash shall be calculated as follows:

$$\frac{A-C}{A} \times 100 = \% \text{ ash}$$

A = weight of original (4.5.1)

C = weight of residue left in sample

4.5.3 Room temperature volatility. An amount of wadding shall be weighed into a glass evaporating dish. An equivalent weight of distilled water shall be added to a second dish. Both shall be exposed for 30 minutes in a draft free atmosphere having a temperature of  $24 \pm 3^\circ \text{C}$  ( $75 \pm 5^\circ \text{F}$ .) and a relative humidity of  $50 \pm 5$  percent. At the end of the exposure period, the comparative loss in weights shall be observed.

4.5.4 Ease of removal and corrosiveness. The impregnated wadding shall be applied in accordance with the manufacturer's instructions to three 1 by 6 inch, clad aluminum panels conforming to QQ-A-250/13. The panel shall then be placed in a horizontal position under an infrared reflector drying lamp (polished face up, and without wiping off the spent polish). The reflector apparatus shall then be adjusted so that a 260 watt drying lamp shall be 12 inches above the test panels. The temperature shall be not less than  $49^\circ \text{C}$  ( $120^\circ \text{F}$ ) at the panel level and shall be not greater than  $60^\circ \text{C}$  ( $140^\circ \text{F}$ ) during drying of the test panels. After allowing the rays of the drying lamp to act upon the panels for 30 minutes, the lamp shall be turned off. After the panels cool to room temperature, they shall be wiped clean with polishing cloth conforming to DDD-C-441 or cotton wiping rags conforming to DDD-R-30 and the ease with which the dried film is removable shall be observed. The polished surfaces shall be observed. The polished surfaces shall be examined for corrosive attack, staining, or discoloration. The test shall be repeated using 1 by 6 inch copper panels conforming to QQ-C-576 and steel panels conforming to MIL-S-7952.

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4.5.5 Effect on painted surfaces.

4.5.5.1 Test panels. The panels shall be made from 0.51 millimeter (0.020 inch) thick aluminum alloy sheet conforming to QQ-A-250/5 anodized to conform to MIL-A-8625 (chromic acid type film) and finished as specified in Table I. The panels measuring 7.6 by 15.2 cm (3 by 6 inches) shall have corners and edges broken and smoothed.

4.5.5.2 Surface hardness loss. The hardness of the lacquered panel surfaces shall be measured by means of a Sward Hardness Rocker, using a hard level surface, such as that furnished by the Cyanamid Panel Holder, as a base. The rocker shall be calibrated and adjusted to give a value of 100 (50 cycles) on a polished glass surface. The hardness of the lacquered surfaces shall then be measured and the reading recorded. A brush shall be prepared for test as described in 4.5.7. With the pad prepared from the impregnated wadding test sample held firmly in place, the weighted brush 1.3 Kg (3 lbs) shall be passed 10 times over the lacquered surface. At the end of this polishing phase, the film shall be allowed to dry for 10 minutes. The panel shall be wiped clean with a minimum amount of pressure, using a cloth of flannel conforming to Type I of CCC-C-458, and examined for discoloration and dulling. The film hardness of the lacquer shall once again be measured with the Sward Hardness Rocker, after the panel has been allowed to stand for 2 hours. The percent loss of surface hardness shall be calculated with the following formula:

$$\text{Percent of Surface Hardness Loss} = 100 - \frac{(H_2 \times 100)}{H_1}$$

where  $H_1$  = Original surface hardness of unused panel.

$H_2$  = Surface hardness of panel after test.

4.5.6 Attack on acrylic base plastics. This test shall be performed using ASTM F 484 Type A acrylic material.

4.5.7 Abrasive number. A weighed 2.54 by 15.24 centimeters (1 by 6 inch) polished aluminum panel shall be set in the recess of a polishing table. A brush shall be prepared for the test by attaching a portion of sample to the bristles of the brush. This portion shall measure 3.7 by 8.74 by .62 cm (1 1/2 by 3 1/2 by 1/4 inch). With the impregnated wadding sample held firmly in place the weighted brush (2.7 kg, 6 lbs) shall then be passed 100 times over the test panel. At the end of this polishing phase, the film formed shall be air dried and removed with a piece of flannel, conforming to CCC-C-458, restricting the rubbing to a minimum. The weight loss of the panel in milligrams shall be taken as the abrasive number.

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4.5.8 Drying time. A brush shall be prepared for the test as described in 4.5.7. With the pad firmly in place, the weighted brush (2.7 kg, 6 lbs.) shall be passed 10 times over a 7.6 by 8.74 cm (3 by 6 inch) clad aluminum alloy panel surface held in a horizontal position. Careful note shall be made of the time required to produce a dry film, the timing to start immediately after the last pass made by the brush.

4.5.9 Polishing ability.

4.5.9.1 Preparation of panels. The clad aluminum alloy panels used in testing the polishing properties shall be cut from .130 centimeter (0.051 inch) thick sheet of 7075-T6 clad aluminum alloy conforming to QQ-A-250/13. They shall be approximately 12.7 centimeters (5 inches) wide by 40.64 centimeters (16 inches) long with corners and edges broken and smoothed with a 1.59 centimeter (5/8 inch) hole drilled near each end of each panel.

4.5.9.2 Selection of panels. The reflectance of each panel shall be measured as specified in 4.5.9.3. If the reflectance reading is greater than 60, the panel shall be tarnished as specified in 4.5.9.4 until a reflectance reading of not less than 40 nor greater than 60 is obtained. The panel shall then be considered suitable for the polishing procedure described in 4.5.9.7.

4.5.9.3 Reflectance measurements. All reflectance measurements shall be made in accordance with Method 6121 of FED-STD-141. The instrument shall be standardized with a polished black glass having a refractive index of 1.52, the instrument being set so that the glass gives a reflectance reading of 15.0. Check settings on the reference standard shall be made at sufficiently brief intervals to insure accuracy of results within 2 percent. Five different portions on the surface of the test panel, shall be measured in order to obtain the average reflectance reading.

4.5.9.4 Tarnishing.

4.5.9.4.1 Reagents. The reagents shall consist of the following:

- a. Solution No. 1 - 1600 milliliters of a 5 percent by weight solution of sodium hydroxide in water.
- b. Solution No. 2 - 800 milliliters of a 1 percent by weight solution of potassium persulphate in water.

4.5.9.4.2 Procedure. Solution No. 1, shall be heated to a gentle boil in a flat, 45.72 by 30.48 by 6.35 centimeter (18 by 12 by 2.5 inch) pyrex dish. The flame shall be removed and Solution No. 2 carefully added with gentle stirring. The test panel shall be immersed in the solution with the polished face upward. As soon as bubbles form (2 to 3 seconds maximum immersion) the panel shall be removed, rinsed with cold water, and dried. The tarnished panel should then give a reflectance reading of not less than 40 nor greater than 60.

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4.5.9.5 Polishing apparatus. Polishing shall be done with weighted brushes. The brushes used for the polishing operation shall consist of metal or wooden blocks measuring 1.27 by 3.81 by 8.89 centimeters (1/2 by 1-1/2 by 3-1/2 inches), with brush stock of approximately staggered tufts, each tuft of  $50 \pm 5$  straight .23 centimeter (.091 inch) diameter nylon fibers extending 1.59 centimeter (5/8 inch) beyond the block. The two brushes together shall be weighted with a 2.72 kilogram (6 pound) weight. A smooth, lined, horizontal polishing table, having a recess 12.7 by 15.24 by .127 centimeter (5 by 6 by .05 inch) to hold the panel, shall be provided.

4.5.9.6 Control formula product. The control product to be used for judging the performance of the manufacturer's product shall be assembled in strict accordance with the formula specified in Table V.

TABLE V. Control formula product.

Ingredient	Composition by Weight, grams
Stearic Acid (USP)	20.0
Mineral Spirits (TT-T-291)	225.0
Talc (USP)	25.0
Kaolin (Acid Washed)	25.0
Calcium Carbonate (Precipitated)	25.0
Glycerin (USP)	5.0
Infusorial Earth (White Calcined)	12.5
Jeweler's Rouge	0.5
Absorbent Cotton (Shredded)	10.0

NOTE: The Control Formula Product shall be prepared by combining the first eight ingredients in a one-pint friction top can and shaking for approximately three minutes using a paint shaking apparatus. The cotton shall be added, the lid replaced, and the shaking shall be continued for approximately ten minutes. Immediately after shaking, the contents of the can shall be transferred to a suitable device in which the impregnated cotton may be subjected to pressure in order to form a circular pad measuring 1.9 cm (.75 inch) in thickness and 7.6 cm (3 inches) in diameter after all of the excess vehicle is removed. The device shall include a perforated cup measuring 7.6 cm (3 inches) inside diameter by 7.6 cm (3 inches) in height and shall be provided with a 7.6 cm (3 inch) disk which may be lowered into the cup, piston fashion, under pressure.

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4.5.9.7 Polishing procedure. The tarnished panel shall be set in the recess of the polishing table. ~~The brushes shall be prepared for the test by attaching a portion of the test sample to the bristles of one brush and similarly attaching a portion of the control formula product on the remaining brush. The portions shall each measure 3.81 by 8.89 by .635 centimeter (1-1/2 by 3-1/2 by 1/4 inch).~~ With the impregnated wadding materials held firmly in place, the brushes shall then be passed 15 times over the tarnished panel. At the end of this polishing phase, the film formed shall be allowed to dry for ten minutes and the foregoing procedure shall be repeated except that pieces of flannel conforming to Type III, Class 1 of CCC-C-458 shall be attached to the bristles of the weighted brushes in place of the impregnated wadding previously used. The parallel polished areas shall be compared visually and by averaged reflectance readings. The polishing procedure shall be performed and reflectance measured on each of three panels. In cases where there may be doubt as to the performance of the materials in actual use, it shall be subjected to the practical polishing test (4.5.9.7.1) and shall show polishing properties equal or superior to the control formula product.

4.5.9.7.1 Practical polishing test. Comparable heavily oxidized unpainted aluminum aircraft surfaces shall be separately polished with the impregnated wadding sample and the control formula product. The polished areas shall be examined visually for compliance with 3.10.

4.5.10 Retention of reflectance. The polished panel from 4.5.10.7 shall be allowed to stand 24 hours in a room reasonably free of corrosive vapors. The reflectance calculated by the following formula:

Percent Retention of Reflectance =

$$\frac{\text{Reflectance reading after aging} \times 100}{\text{Reflectance reading before aging}}$$

4.5.11 Stability. The test sample of impregnated wadding shall be shelved with container unopened for 72 hours. At the end of 24 hours the container shall be inverted. This procedure shall be repeated at the end of the second 24 hour period. At the end of the third 24 hour period the container shall be opened and the contents shall be transferred intact to a wide mouth glass jar with screw cap. The interior of the original container shall be examined. Evidence of solvent or powdered sediment separation shall be noted. The glass container shall be shaken for 15 minutes in a mechanically operated sieve shaker which vibrates approximately 950 times per minute and receives two impacts per revolution. A semi-soft rubber disk shall be placed between the bottom of the glass container and the vibrating platform to prevent sharp impact. Separation of solvent or powdered solid shall be noted.

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4.5.12 Flash point (of solvent ingredient). The flash point of the solvent ingredient shall be determined by Method 4291 of FED-STD-141.

4.6 Submission of Material Safety Data Sheets. The contractor shall furnish to the contracting activity the toxicological data and formulations required to evaluate the safety of the material for the proposed use through the submission of the Material Safety Data Sheet detailed in FED-STD-313.

## 5. PACKAGING

5.1 Preservation. The preservation shall be Level A or C as specified unless otherwise specified by the procuring activity. The container, closure, sealing devices or contents shall not interact physically or chemically so as to alter the strength of the container and purity or quality of the contents for at least one year from the date of shipment. All containers shall be new and free of foreign contaminants.

5.1.1 Level A. The impregnated wadding shall be rolled and preserved within a round metal can measuring six inches in diameter and five inches in height with a diameter tolerance of +0.5 and -0 inches for the two pound size, and measuring three and one half inches in both diameter and height with a dimensional tolerance of +.25 and -.0 for the five ounce size. The container shall conform to Type VI of PPP-C-96. The cans shall be fabricated of metal with a minimum hot dipped tinplate weight of 1.25 pounds per base box or electrolytic tinplate weight of 0.25 pounds per base box. The exterior coating of the cans shall conform to Plan "A" of PPP-C-96. The side seams of the cans shall either be fabricated as specified in PPP-C-96 or cemented or locked. A continuous strip of pressure sensitive tape, conforming to MIL-T-21595, shall be used to seal the can closure in a manner that will preclude the formation of channels in the seal.

5.1.2 Intermediate packing (5 ounce size). Twelve cans shall be packaged within a close fitting fiberboard container conforming to PPP-B-636, Type I or II, Class 1. The arrangement of the containers may be three by two floored with two tiers or a single tier of three by four. Double faced corrugated pads shall be placed between the rows as well as the tiers of cans.

5.1.3 Level C. The impregnated wadding shall be preserved in accordance with ASTM D 3951.

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

5.2.1 Level A.

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5.2.1.1 Two pound size. Twelve unit containers preserved as specified shall be packed within a close fitting fiberboard shipping container conforming to PPP-B-636, Type I or II, Class 2. The containers shall be placed in two tiers of three cans per row, or in one tier of twelve cans, consisting of three rows of four cans per row. Double faced corrugated pads shall be used between the verticle rows of cans and between the tiers, when the two tier plan is utilized. The closure procedure and strapping shall be in accordance with the appendix to PPP-B-636.

5.2.1.2 Five ounce size. Six intermediate containers of twelve cans each, packaged as specified in 5.1.2, shall be packed within a close fitting fiberboard container conforming to PPP-B-636, Type I or II, Class 2. The intermediate packages shall be arranged in two tiers of three each.

5.2.2 Level B. Shall be the same as for Level A (5.2.1) except that the containers shall be domestic service grade types as indicated in PPP-B-636, Type I or II, Class 1.

5.2.3 Level C. Unit containers packaged as specified in packages that require overpacking for acceptance by the carrier shall be packed in exterior type shipping containers in a manner that will insure safe transportation at the lowest rate to the point of delivery, and shall meet as a minimum, the requirements of the rules and regulations applicable to the mode of transportation selected.

### 5.3 Marking

5.3.1 Standard marking. All unit and shipping containers shall be marked in accordance with MIL-STD-129.

5.3.2 Special marking. In addition to the marking requirements of 5.3.1, the label on the unit container shall be marked as specified:

#### DIRECTIONS FOR USE

- a. Tear off small portion of wadding and rub in a straight line motion over a small area.
- b. After film dries, wipe with dry wiping cloth until surface has lustre finish.
- c. Always replace the lid after removal of desired quantity of wadding.
- d. Caution: Do not use on acrylic plastics.

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PRECAUTIONS

- a. Flammable - Keep away from open flame.
- b. Moderately toxic - Use gloves or wash hands after using. Continuous contact with the skin will cause irritation.

6. NOTES

6.1 Intended use. The metal polish impregnated wadding is principally intended for polishing aluminum or alclad aluminum aircraft surfaces, and may also be used for polishing many other metal surfaces including copper, brass, steel, and chromium plating.

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number and date of this specification.
- b. Quantity desired.
- c. Type and size of container in which wadding is to be furnished.
- d. Preservation, packing, and marking data with requirements in detail, if other than as specified in section 5.

6.3 First article. When a first article inspection is required, the impregnated wadding should be a first production item. The first article should consist of the sample specified in 4.3.1. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, 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 requirements 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 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 appendix B of FED-STD-313.

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6.5 Subject term (Key word) listing.

alclad aluminum  
aluminum  
brass  
chromium plating  
copper  
first article  
flammable  
material safety data sheets  
moderately toxic  
polish, metal  
steel  
wadding, impregnated

6.6 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:  
Army - GL  
Navy - AS

Preparing activity:  
Navy - AS  
(Project 7920-0258)

Review:  
Army - MD

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**NOTE:** This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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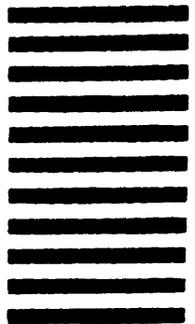


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<b>1. DOCUMENT NUMBER</b> MIL-I-22590C	<b>2. DOCUMENT TITLE</b> IMPREGNATED WADDING, METAL POLISH
<b>3a. NAME OF SUBMITTING ORGANIZATION</b>	<b>4. TYPE OF ORGANIZATION (Mark one)</b> <input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify): _____
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<b>5. PROBLEM AREAS</b>	
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