

INCH-POUND

MIL-PRF-25134C(USAF)

15 June 1996

SUPERSEDING

MIL-R-25134B(USAF)

10 March 1972

PERFORMANCE SPECIFICATION
REMOVER, PAINT AND LACQUER, SOLVENT TYPE

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

1. SCOPE

1.1 Scope. This specification covers one type and grade of paint remover for use on aircraft and other metal surfaces.

2. APPLICABLE DOCUMENTS

2.1 General. 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 documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the applicable issues of these documents are those listed in the specific issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

O-A-451 - Ammonium Hydroxide, Technical

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be of use in improving this document should be addressed to: (WR-ALC/LKJE, 460 2ND ST., STE 221 ROBINS AFB, GA 31098-1640), by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8010

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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QQ-P-416	-	Plating, Cadmium (Electrodeposited)
TT-L-32	-	Lacquer, Cellulose Nitrate, Gloss, (For Aircraft Use)
TT-E-489	-	Enamel, Alkyd, Gloss, Low VOC Content
TT-P-1757	-	Primer Coating, Zinc Chromate, Low Moisture Sensitivity
VV-W-95	-	Wax, Paraffin, Technical

DEPARTMENT OF DEFENSE

MIL-M-3171	-	Magnesium Alloy, Processes for Pretreatment and Prevention of Corrosion On
MIL-C-5541	-	Chemical Conversion Coatings on Aluminum and Aluminum Alloys
MIL-C-8514	-	Coating Compound, Metal Pretreatment, Resin Acid
MIL-L-81352	-	Lacquer, Acrylic (For Naval Weapons Systems)

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

DEPARTMENT OF DEFENSE

MIL-STD-129-	Marking for Shipment and Storage
MS35649	- Nut, Plain, Hexagon, Machine Screw, UNC-2B
MS35206	- Screw, Machine-Pan Head, Cross-Recessed, Carbon Steel, Cadmium Plated, UNC-2A
NAS 1149	- Washer, Flat

(Unless otherwise indicated, copies of the above specifications and standards are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA, 19111-5094.)

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2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the applicable issues of the documents which have been adopted by the DoD are those listed in the specific issue of the DoDISS cited in the solicitation. Unless otherwise specified, the documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

ASQC Z1.4-1993 - Sampling Procedures And Tables For Inspection
By Attributes

(Application for copies should be addressed to American Society for Quality Control, 611 East Wisconsin Avenue, P.O. Box 3005, Milwaukee, Wisconsin, 53201-3005)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS

ASTM A623	Standard Specification for Tin Mill Products, General Requirements
ASTM A624	Standard Specification for Tin Mill Products, Electrolytic Tin Plate, Single Reduced
ASTM B209	Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
ASTM D740	Standard Specification for Methyl Ethyl Ketone
ASTM D2196	Standard Test Methods for Rheological Properties of Non-Newtonian Materials
ASTM D4701	Standard Specification for Technical Grade Methylene Chloride
ASTM F519	Standard Test Method for Mechanical Hydrogen Embrittlement Testing of Plating Processes and Aircraft Maintenance Chemicals

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

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE AMS 4377	Sheet and Plate, Magnesium Alloy 3.0Al -1.0Zn - 0.20Mn (AZ31B-H24) Cold Rolled, Partially Annealed
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SAE AMS 5046 Sheet, Strip, and Plate, Carbon Steel (SAE 1020 and 1025)
Annealed

(Applications for copies should be addressed to Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated specifications or specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained. If there is a conflict between the contents of this specification and an associated specification or specification sheet, the associated specification or specification sheet will apply.

3. REQUIREMENTS

3.1 Qualification. The remover furnished under this specification shall be a product which has been tested and passed the qualification tests specified herein, and has been listed or approved for listing on the applicable qualified products list.

3.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the materials meet or exceed the operational and maintenance requirements, and promote economically advantageous life cycle costs.

3.3 Materials. The manufacturer is given wide latitude in the selection of raw materials and processes of manufacture but shall be restricted by the requirements of this specification. The materials shall be of high quality and entirely suitable for the purpose intended.

3.3.1 Toxicity. The material shall have no adverse affect on the health of personnel when used for its intended purpose. The material shall not contain any hazardous compound as defined in FED-STD-313, nor shall it contain any chemical listed in the current report of known carcinogens of the National Toxicology Program.

3.3.2 Waste disposal characteristics. Surfactants used shall be a minimum of 90% biodegradable. The supplier shall furnish certification from the surfactant manufacturer of the percent activity and percent biodegradability of the surfactants. Additionally, the compound shall not contain more than 2000 milligrams/liter of heavy metals.

3.4 Appearance. The remover shall be free from skins and lumps. It shall be readily mixable to a homogeneous condition and shall remain homogeneous for a period of 1 hour when tested as specified in 4.7.1.

3.5 Consistency and flow. The remover shall be a liquid of such consistency that a smooth, even coating can be applied by brush, spray, or flowing (see 4.7.2).

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3.6 Viscosity. When tested at $77^{\circ} \pm 3^{\circ}\text{F}$ as specified in 4.7.3 the remover shall have a viscosity of not less than 6.0 or more than 14.0 poises.

3.7 Volatility. The volatility of the paint remover shall be equal to or less than the volatility of distilled water, when tested as specified in 4.7.4.

3.8 Removal power. When tested as specified in 4.7.5, the remover shall loosen, soften, and remove enamel and lacquer finishes as well as, or better than, the paint stripping efficiency comparison formula product (see 4.5).

3.9 Rinsability. When tested as specified in 4.7.6, enamel and lacquer films that have been lifted by the remover shall be as completely and readily removed by flushing with a stream of water as those lifted by the comparison formula.

3.10 Coating residue. The remover shall leave no coating residue or remover residue greater than that left by the comparison formula on stripped and water-rinsed metal surfaces when tested as specified in 4.7.7.

3.11 Remover residue. The remover shall leave no more residue than the comparison formula on bare or pretreated metal surfaces when tested as specified in 4.7.8.

3.12 Corrosion. The remover shall not corrode uncoated steel, cadmium plated steel, tinplate, aluminum alloy, magnesium, or combinations thereof when tested as described in 4.7.9.

3.13 Hydrogen embrittlement. When tested as specified in 4.7.10, there shall be no evidence of hydrogen embrittlement of the test specimen. Failure of any specimen of the test group constitutes failure of the entire group.

3.14 Flammability. The remover shall not continue to burn after removal of an externally applied flame when tested as specified in 4.7.11.

3.15 Cold stability. When tested as specified in 4.7.12, remover that has been cooled to $14^{\circ} \pm 2^{\circ}\text{F}$ for 4 hours, then returned to room temperature shall be as readily dispersed to its original appearance and consistency as an uncooled sample. After standing for 1 hour without agitation, the cooled sample shall show no more settling than an uncooled sample.

3.16 Storage stability. After 6 months storage as specified in 4.7.13, the remover shall conform to all of the requirements of this specification.

3.17 Service test. The remover, when tested as specified in 4.7.14 shall show satisfactory performance in actual use.

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4. VERIFICATION

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

- a. Qualification inspection. (See 4.2)
- b. Quality conformance inspection. (See 4.3)

4.2 Qualification inspection.

4.2.1 Qualification procedures. Upon successful completion of all testing requirements as specified herein except the service test (see 3.17 and 4.7.14), the contractor shall provide a certified qualification test report showing that the material conforms to all requirements of this document. The report shall be forwarded to WR-ALC/LKJE, 460 2ND ST, STE 221, ROBINS AFB, GA 31098-1640. Upon review and acceptance of the test report, the government will add the product to the Qualified Products List or request that service testing be accomplished. If service testing is required, procedures will be as specified in 4.7.14.

4.2.2 Qualification test report. The qualification test report shall include complete data, in the contractor's format, to describe method of performance of each test and definitive results to verify that the material conforms to all requirements of this specification except the service test. The report shall also include complete formulation data identifying each ingredient of the remover by chemical or proprietary name.

4.3 Quality conformance inspection. Quality conformance inspection shall include all tests of this specification except hydrogen embrittlement (4.7.10), cold stability (4.7.12), storage stability (4.7.13), and service tests (4.7.14).

4.4 Test conditions. Except as otherwise specified in the particular test methods, all testing shall be conducted under standard laboratory conditions of $75^{\circ} \pm 2^{\circ}$ F and 50 ± 5 percent relative humidity.

4.5 Comparison formula. The comparison formula required by this specification shall be prepared as follows:

<u>INGREDIENTS</u>	<u>PERCENT BY WEIGHT</u>
Paraffin Wax (Specification VV-W-95, Grade B, Finely Shaved)	3.0
Methylene Chloride (ASTM D4701)	67.0
Wetting Agent (alkyl aryl sulfonate, Santomerse I, or equal)	5.0
Methyl Cellulose (Commercial Grade, 400 Cps)	5.0
Tetrahydrofuran (Commercial Grade)	7.0
Methyl Ethyl Ketone (Technical) ASTM D740	6.0
Ammonium Hydroxide, (Technical O-A-451, Type I)	7.0

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4.5.1 Preparation. A three-necked flask, fitted with stirrer, reflux condenser and dropping funnel is charged with the solids (Wax, Wetting Agent, and Methyl Cellulose). The organic solvents are then added to the solids already in the flask. While stirring, the formulation is brought to reflux for a period of one hour. Use an appropriate size heating mantle to heat the flask. At the end of the reflux period, remove the heating mantle and cool the flask to touch. Ammonium Hydroxide is then added with stirring, at a rate of 5 ml/min. Care must be taken to assure ammonium hydroxide vapors do not traverse the reflux condenser. The cooling water used in the reflux condenser should be below 75°F to preclude the loss of Tetrahydrofuran and Ammonium Hydroxide vapors. Comparison formula that is over 7 days old shall not be used.

4.6 Preparation of coated test panels. Test panels shall be made from aluminum alloy sheet conforming to ASTM B209. The panels shall measure 5 inches by 24 inches. The edges shall be broken and smoothed. Panels shall be cleaned with a suitable solvent to remove any grease that is present. Panels shall be prepared as specified in Table 1 and cured at $75^{\circ} \pm 2^{\circ}\text{F}$ and a relative humidity of $50\% \pm 5\%$, for a period of 90 days prior to testing. After curing, apply several strips of 0.5 to 1.0 inch wide masking tape parallel to the 5 inch edge of the panel and spaced so that six 2.5 by 5 inch areas of coated surface are exposed between the strips of tape.

TABLE 1. TEST PANEL FINISHES

LACQUER PANELS "A"

Processing Step	Material	No. of Coats and Coat Thickness	Drying Time Between Coats	Drying Time Before Baking	Baking Conditions
1	Coating, Pretreatment, MIL-C-5541, Class 1A				
2	Coating, Pretreatment Smooth Finish, Spray Type MIL-C-8514	One 0.2 to 0.3 Mils	30 min at Room Temp		
3	Zinc Chromate Primer TT-P-1757	One 0.3 to 0.4 Mils	1 Hour at Room Temp		
4	Lacquer, MIL-L-81352, Insignia White, Color No. 17875	Two 0.5 to 0.6 Mils	45 min at Room Temp	24 Hours	150°F for 96 Hours

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LACQUER PANELS "B"

Processing Step	Material	No. of Coats and Coat Thickness	Drying Time Between Coats	Drying Time Before Baking	Baking Conditions
1	Coating, Pretreatment, MIL-C-5541, Class 1A				
2	Coating, Pretreatment Smooth Finish, Spray Type MIL-C-8514	One 0.2 to 0.3 Mils	30 min at Room Temp		
3	Zinc Chromate Primer TT-P-1757	One 0.2 to 0.3 Mils	18 Hours at Room Temp		
4	Lacquer, Type I, TT-L-32 Insignia White, Color No. 17875	Two 0.5 to 0.6 Mils	60 min at Room Temp	24 Hours	150°F for 96 Hours

ENAMEL PANELS "C"

Processing Step	Material	No. of Coats and Coat Thickness	Drying Time Between Coats	Drying Time Before Baking	Baking Conditions
1	Coating, Pretreatment, MIL-C-5541, Class 1A				
2	Coating, Pretreatment Smooth Finish, Spray Type MIL-C-8514	One 0.2 to 0.3 Mils	30 min at Room Temp		
3	Zinc Chromate Primer TT-P-1757	One 0.3 to 0.4 Mils	18 Hours at Room Temp		
4	Enamel, TT-E-489 Class A, Composition L	One Mist Coat	45 min at Room Temp		
5	Enamel, TT-E-489 Class A, Composition L	One 1.0 to 1.5 Mils		18 Hours at Room Temp	150°F for 96 Hours

4.7 Test methods.

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4.7.1 Appearance. The remover shall be mixed by brisk hand shaking for a period of 30 seconds after which it shall be examined for skins, lumps, and homogeneity. Approximately 50 milliliters of the mixed remover shall then be poured into a 100 milliliter graduated glass cylinder and allowed to stand for 1 hour. At the end of the 1 hour period, the remover shall be visually examined for any signs of separation. Any visible separation shall be considered unacceptable and the material shall be rejected.

4.7.2 Consistency and flow. An enamel-coated aluminum test panel conforming to section 4.6 shall be used for this test. The panel shall be taped as specified in section 4.6 to provide 2.5 by 5-inch coated areas. A strip of masking tape three quarters of an inch wide shall be placed at the top of one these areas, and two strips shall be placed at the bottom of the same area. After taping, the panel shall be placed with its long edge horizontal and its short edge at a 45° angle from the horizontal. Sufficient well mixed remover shall then be poured along the top edge of the panel to completely wet and cover the taped-in test area. Application time shall not exceed 10 seconds. The area enclosed by the tape shall be visually examined during the initial run off of excess remover, then again 5 minutes and 15 minutes after the initial application. The remover shall drain so that a heavy, wet film remains over the entire test area of the panel. No evidence of shearing action or dry spotting of the film is acceptable.

4.7.3 Viscosity. A 450-milliliter sample of the remover shall be placed in a 600-milliliter beaker. Viscosity of the sample shall be determined at $77^{\circ} \pm 3^{\circ}\text{F}$ using a Model LVF Brookfield Viscometer, or its equivalent, with a No. 3 spindle operating at 30 rpm in accordance with ASTM D2196. Readings shall be taken after the spindle has been operating for a minimum of 3 minutes. Material shall be rejected if viscosity is less than 6.0 or greater than 14.0 poises.

4.7.4 Volatility. A Petri dish, 9 centimeters in diameter and 1.5 centimeters deep, shall be placed on each pan of a two-pan beam balance. Sufficient remover shall be added to cover the entire bottom of one of the dishes. Distilled water shall be carefully poured in the other dish until the dish containing the remover is counter balanced. The balance with the Petri dishes on the pans shall be exposed for 30 minutes in a draft-free atmosphere having a temperature of $75^{\circ} \pm 5^{\circ}\text{F}$ and a relative humidity of $50\% \pm 5\%$. At the end of the exposure period, the comparative loss in weights shall be observed. If the paint remover weight loss exceeds weight loss of the distilled water, the material shall be rejected.

4.7.5 Removal power. Place one of each of the three different test panels prepared as specified in 4.6 in a suitable container with the long edge horizontal and the short edge at a 45° angle to the horizontal. Pour just enough of the well mixed comparison formula along the top edge of the panel to completely wet one of the coated test areas, allowing the excess to drain off. Do not permit application time to exceed 10 seconds. Note the time at which application is started and the time when lifting or wrinkling of the coating is complete. Within one minute of initial application, repeat the process on the next panel. Continue with the process to establish optimum removal time for each type of test panel for the comparison formula. Repeat the above process, alternating test areas with test remover and comparison formula, and leaving the remover on the panel for the time established during the first part of the test. When the established optimum time

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is reached, the panels shall be rinsed in a stream of tap water. Gentle brushing with a soft bristle brush is acceptable to break the lifted film. The areas tested with comparison formula and those tested with test remover shall be compared for completeness of paint removal in compliance with requirements of 3.8. If the remover demonstrates worse performance than the comparison formula, measured by area of paint not removed, the material shall be rejected.

4.7.6 Rinsability. Rinsability shall be determined immediately after the removal test of 4.7.5 using the same test panels. After lifting of the coating and rinsing is complete on the areas tested as specified in 4.7.5, the areas tested with comparison formula and those tested with remover shall be compared for ease and completeness of flushing off lifted wrinkled finish and for freedom from residue. Brushing with a soft bristle brush is acceptable to break residue film. If rinsing characteristics or remaining residue is observably worse with the remover than with the comparison formula, the material shall be rejected.

4.7.7 Coating residue. One panel of each paint system (see Table 1) shall be prepared and taped as specified in 4.6. The procedure specified in 4.7.5 for application of the remover and comparison formula shall then be repeated and the panels permitted to stand for 15 minutes. At the end of the 15 minute period, the panels shall be lowered to a horizontal position. After the remover and comparison formula have been in contact with the panel finish for 2 hours, a gentle stream of tap water shall be flowed over the test areas while they are gently scrubbed with a soft bristle brush. The panels shall then be rinsed with distilled water and air dried. If the remover stripped areas indicate coating residue or remover residue exceeding that left by the comparison formula, the material shall be rejected.

4.7.8 Remover residue. Samples of the remover and comparison formula shall be flowed onto separate 3 by 6 inch 2024-T3 aluminum alloy panels conforming to ASTM B209. After the remover and comparison formula have been applied, the panels shall be placed at a 45° angle from the horizontal in an oven maintained at 100° ± 3°F for 15 minutes. At the end of the 15 minute period the panels shall be removed from the oven, rinsed with a fine stream of tap water (50° to 70°F) then rinsed with distilled water and allowed to air dry. If the remover leaves more residue than the comparison formula, the material shall be rejected.

4.7.9 Corrosion.

4.7.9.1 Preparation of test panels. Sixteen test panels 1 inch by 2 inches and of any convenient thickness shall be prepared from the following metals:

Two each	-	Steel, SAE AMS 5046
Two each	-	Tinplate, ASTM A623 and ASTM A624, Type MR, Temper T4, Class Electrolytic 25, bright finish
Two each	-	Magnesium alloy, SAE AMS 4377 (AZ31B-H24), treated in accordance with MIL-M-3171, Type I
Two each	-	Magnesium alloy, SAE AMS 4377 (AZ31B-H24), treated in accordance with MIL-M-3171, Type III

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Four each	-	Aluminum alloy 2024-T3, ASTM B209
Four each	-	Aluminum 1100-H24, ASTM B209

The steel, tinplate, and aluminum panels shall be washed with a suitable solvent after which they shall be cleaned with acetone-wet pumice and rinsed with methyl alcohol. The magnesium panels shall be rinsed with acetone.

4.7.9.2 Single panel corrosion test. The steel, tinplate, and two each of the 2024 and 1100 aluminum panels shall be accurately weighed, placed singly at approximately a 45° angle in the smallest practicable jars, and completely submerged in remover. The jars shall be tightly sealed and placed in an oven maintained at 100° ± 3°F. At the end of 168 hours at temperature, the samples shall be removed and brushed as necessary to remove difficult residue. The panels shall then be cleaned with a suitable solvent, dried, and weighed. Any pitting, etching, or change in weight exceeding the following limits shall be considered as indicating corrosion and shall be grounds for rejection of the material:

Steel	±1.0 mg	2024 aluminum alloy	±0.3 mg
Tinplate	±0.4 mg	1100 aluminum	±0.3 mg

4.7.9.3 Corrosion test for dissimilar metal.

4.7.9.3.1 Coupling of dissimilar metal test panels. The two remaining 2024 aluminum alloy panels prepared in accordance with 4.7.9.1 shall be coupled to the panels of magnesium alloy treated in accordance with MIL-M-3171, Type III. The two remaining 1100 aluminum panels (4.7.9.1) shall be coupled to the panels of magnesium alloy treated in accordance with MIL-M-3171, Type I. The size and placement of holes required for coupling shall be in accordance with Figure 1. The panels shall be positioned and assembled in accordance with Figure 2 and coupled with cadmium plated steel screws, washers, and nuts as indicated below:

- a. Screws, MS35206-232, except plating shall be QQ-P-416, Type I, Class 1.
- b. Washers, NAS 1149, except plating shall be QQ-P-416, Type I, Class 1.
- c. Nuts, MS35649-262, except plating shall be QQ-P-416, Type I, Class 1.

The assemblies shall be tightened to 6 inch-pounds torque. The contact area shall be approximately one square inch. Each couple shall be checked to insure good electrical continuity.

4.7.9.3.2 Procedure. The coupled panels shall be placed at an angle (approximately 45°) in separate jars of the smallest practicable size after which they shall be completely submerged in remover. The jars shall be tightly sealed and placed in an oven maintained at 100° ± 3°F for a period of 72 hours. The panels shall then be removed and immediately suspended vertically for 72 hours in a desiccator. Prior to the test, the desiccator shall be cleaned and the lower portion filled with distilled water after which it shall be closed and conditioned at 77° ± 2°F. During the test the desiccator shall be kept tightly sealed in an area maintained at 77° ± 2°F. At the end of the 72

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hour period the panels shall be removed, disassembled, washed with water, and cleaned with a suitable solvent. The individual panels shall then be inspected for pitting, etching, and corrosion products. (Slight surface etching under the washers on magnesium panels treated in accordance with MIL-M-3171, Type I shall not be cause for rejection.)

4.7.10 Hydrogen embrittlement test. Specimens shall be prepared and tested in accordance with ASTM F519, Type 1a, for maintenance chemicals. Accept/reject criteria shall be in accordance with ASTM F519, paragraph 9.

4.7.11 Flammability.

4.7.11.1 Preparation of panel. A 1 by 6 inch panel shall be prepared from 2024-T3 aluminum alloy conforming to ASTM B209. The panel shall be cleaned and a hole drilled near one end to facilitate hanging. The panel shall then be dipped in a beaker of the remover and immediately suspended on a ring stand.

4.7.11.2 Procedure. A micro-burner flame, not exceeding 3/16 inch in length shall be passed, within a 2 second period, back and forth along the lower edge of the panel. This operation shall be repeated a minimum of three times at 3 to 5 second intervals. If the remover ignites, the flame shall be removed from the panel and observation shall be made to ascertain whether the remover continues to burn. Continuation of burning shall be cause for rejection.

4.7.12 Cold stability. Equal quantities of the remover shall be placed in two separate glass containers. One of the containers shall stand at room temperature while the other is cooled to a temperature of $14^{\circ} \pm 2^{\circ}\text{F}$ for a period of 4 hours. At the end of the 4 hour period the cooled sample shall be permitted to return to room temperature after which both samples shall be agitated by moderate shaking for 30 seconds. After shaking, the samples shall be examined for any differences in appearance and consistency. They shall then be permitted to stand for 1 hour and the cooled sample observed for settling as compared to the uncooled specimen. If the cooled sample exhibits undesirable changes in consistency or appearance or shows more settling than the uncooled sample after the 1 hour settling period, the material shall be rejected.

4.7.13 Storage stability. A sample of remover shall be stored unopened at a temperature of $75^{\circ} \pm 5^{\circ}\text{F}$ for 6 months. At the end of the storage period the container shall be opened and the contents tested for conformance to the requirements of paragraphs 4.7.1 through 4.7.12. If the sample fails to meet any of the specified requirements, the material shall be rejected.

4.7.14 Service test. If service testing is required, the government, in coordination with the contractor, will determine an acceptable field location. Unless otherwise specified, the contractor shall provide 50 gallons of remover to the designated field location for testing. Samples will be forwarded in accordance with instructions contained in the service test authorization letter. The service test shall consist of field evaluation under service conditions conducted in accordance with standard operating procedures on as many aircraft or as much equipment as needed to determine suitability of the product for military use.

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4.8 Examination for packaging, packing, and marking. An examination shall be made to determine that packaging, packing, and marking of the end item complies with the applicable requirements of Section 5. The sample unit shall be one complete shipping container. Sampling shall be in accordance with ANSI/ASQC Z1.4-1993.

4.9 Requirements cross-reference matrix. Table 2 provides a cross-reference matrix of the Section 3 requirements and Section 4 verification paragraphs.

TABLE 2: Requirements Cross-Reference Matrix

REQUIREMENT	VERIFICATION
3.4	4.7.1.
3.5	4.7.2
3.6	4.7.3
3.7	4.7.4
3.8	4.7.5
3.9	4.7.6
3.10	4.7.7
3.11	4.7.8
3.12	4.7.9 - 4.7.9.3.2
3.13	4.7.10
3.14	4.7.11
3.15	4.7.12
3.16	4.7.13
3.17	4.7.14

5. PACKAGING

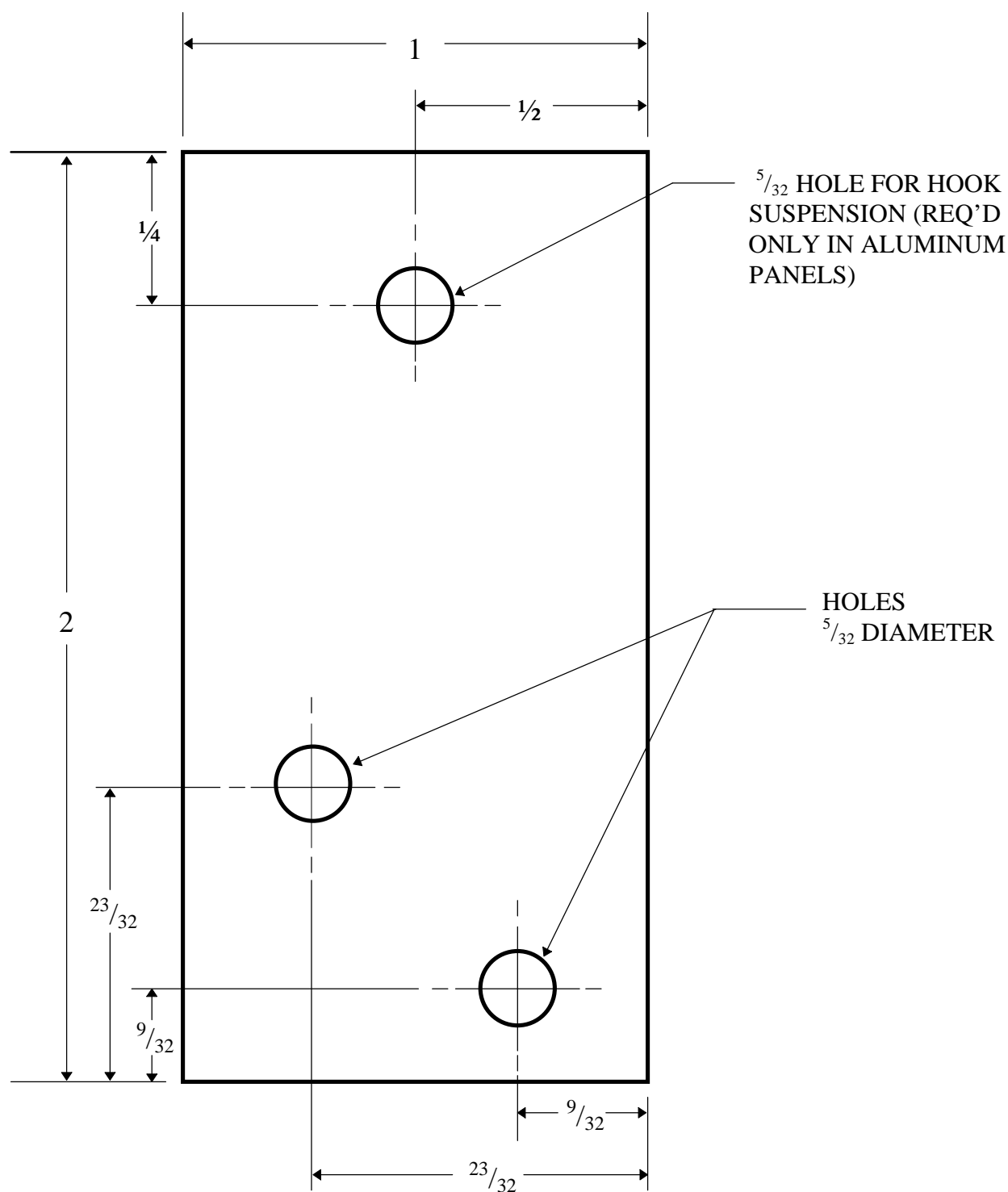
5.1 General. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's Acquisition Command. 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 which may be helpful, but is not mandatory.)

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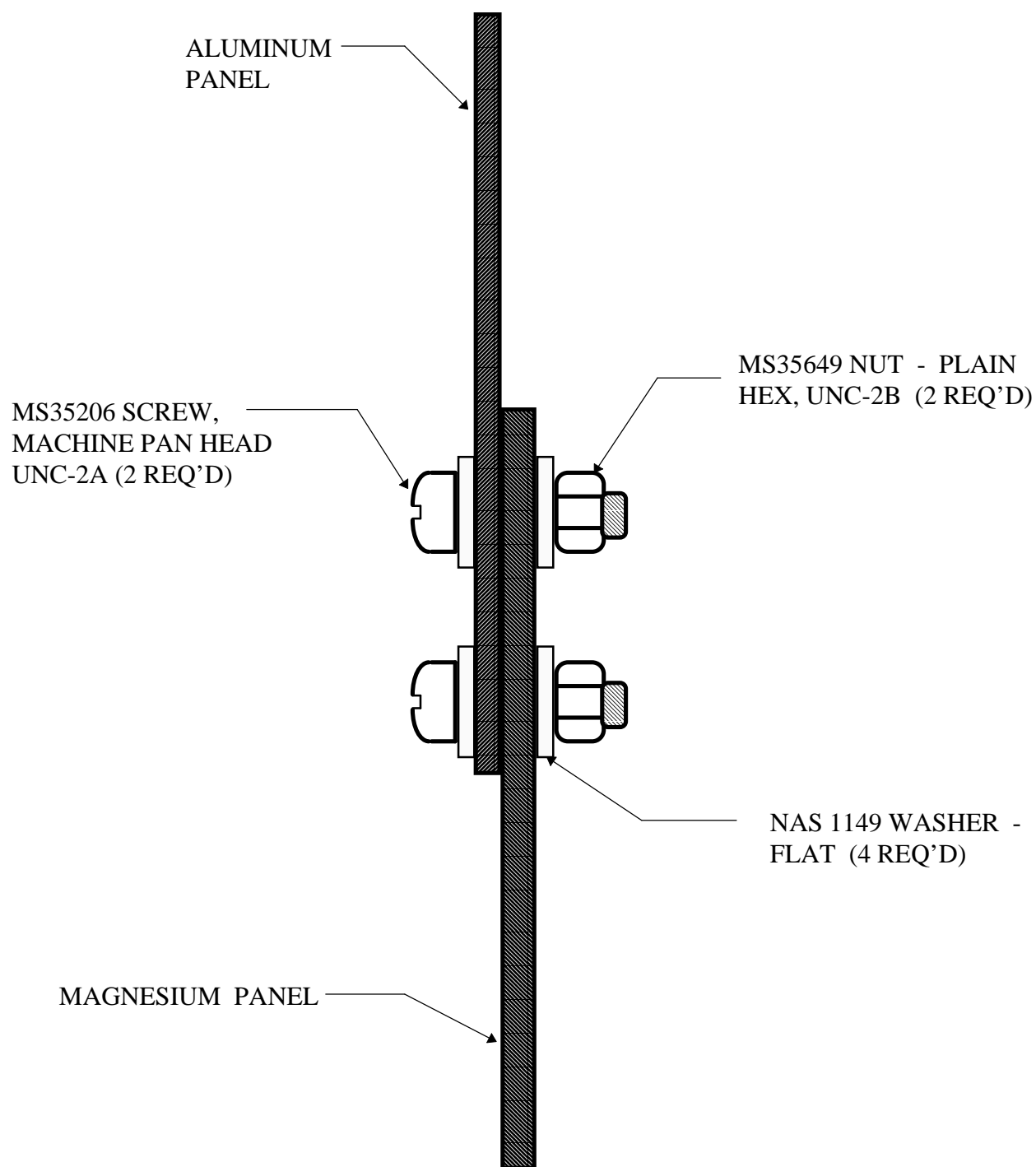
FIGURE 1. DIMENSIONS FOR DISSIMILAR METAL TEST PANELS



DIMENSIONS IN INCHES,
 TOLERANCES: DIMENSIONS SHOWN SHALL BE NOMINAL EXCEPT THAT
 TOLERANCES FOR THE 2 BOLT HOLES SHALL BE WITHIN LIMITS THAT WILL PERMIT
 ASSEMBLY OF THE PANELS AS SHOWN IN FIGURE 2.

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FIGURE 2. COUPLING OF DISSIMILAR METAL TEST PANELS



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6.1 Intended use. The paint remover covered by this specification is intended to be used for removing lacquer and enamel coating finishes from metal surfaces of aircraft or other surfaces.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Issue of the DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
- c. Part number and container size (see 6.5).
- d. Material Safety Data Sheets, if required (see 6.6).
- d. 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-25134, 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 may be obtained from WR-ALC/LKJE, 460 2ND ST, STE 221 ROBINS AFB, GA, 31098-1640.

6.4 Comparison formula. The comparison formula described in 4.5 does not conform to all the requirements of this specification. It is intended as a means of standardization in order that certain desired properties may be obtained.

6.5 Definitive specification part number. The part number for the paint remover shall be one of the following:

M25134-A = paint remover packaged in a 1 US gallon container

M25134-B = paint remover packaged in a 5 US gallon container

M25134-C = paint remover packaged in a 55 US gallon container

6.6 Material Safety Data Sheets. When specified (see 6.2) Material Safety Data Sheets will be provided in accordance with FED-STD-313.

6.7 Subject term (key word) listing.

MIL-PRF-25134C(USAF)

Aircraft	Magnesium alloys
Aluminum alloys	Removal power
Corrosion	Residue
Enamel	Surfactant
Heavy metal	

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

Custodian:
Air Force - 99

Preparing activity:
Air Force - 84

Agent:
Air Force - 99

(Project 8010-0975)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

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I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER
MIL-PRF-25134C

2. DOCUMENT DATE (YYMMDD)

3. DOCUMENT TITLE

Remover, Paint and Lacquer, Solvent Type

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. Organization

c. ADDRESS (Include zip code)

d. TELEPHONE (Include Area Code)

(1) Commercial

(2) DSN

(if applicable)

7. DATE SUBMITTED
(YYMMDD)

8. PREPARING ACTIVITY

a. NAME

WR-ALC/LKJE

b. TELEPHONE (Include Area Code)

(1) Commercial 912/926-6630 (2) DSN 468-6630

c. ADDRESS (Include Zip Code)

460 2ND ST STE 221
ROBINS AFB GA 31098-1640

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

Defense Quality and Standardization Office
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466
Telephone (703) 756-2340 DSN 289-2340