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AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3375B

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Superseding AMS 3375A

Adhesive/Sealant, Fluorosilicone Aromatic Fuel Resistant, One-Part Room Temperature Vulcanizing

1. SCOPE:

1.1 Form:

This specification covers a one-part fluorosilicone (FVMQ) adhesive/ sealant, supplied in cartridges, suitable for extrusion and curing to an elastomeric material upon exposure to air. It also covers a compatible primer.

1.2 Application:

This adhesive/sealant has been used typically for bonding cured fluorosilicone rubber and for sealing applications requiring resistance to fuels, oils, or solvents from -65 to +400 °F (-54 to +204 °C), but usage is not limited to such applications. This product should not be used for fay surface sealing or similar applications where exposure to air cannot be maintained. This product should not be used in thicknesses greater than 0.25 inch (6.4 mm), particularly in applications involving encapsulation.

1.3 Precautions:

It has been found that adhesive/sealants meeting this specification do not adhere very well to 18 chromium-8 nickel type corrosion-resistant austenitic stainless steels such as 301, 302, 304 and 316SS. These adhesive/sealants liberate acetic acid during cure and require handling precautions (See 8.2).

1.4 Safety - Hazardous Materials:

While the materials, methods, applications, and processes described in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

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2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been canceled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 1640	Corrosion Removing Compound, For Aircraft Surfaces
AMS 2471	Anodic Treatment of Aluminum Alloys, Sulfuric Acid Process, Undyed Coating
AMS 2473	Chemical Treatment for Aluminum Alloys, General Purpose Coating
AMS 2629	Fluid, Jet Reference
AMS 2825	Material Safety Data Sheets
AMS 3217/5	Test Slabs, Fluorosilicone (FVMQ), 55 - 65
AMS 3325	Fluorosilicone Rubber, Fuel and Oil Resistant, 55 - 65
AMS 3819	Cloths, Cleaning, For Aircraft Primary and Secondary Structural Surfaces
AMS 4045	Aluminum Alloy, Sheet and Plate, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (7075; -T6 Sheet, -T651 Plate), Solution and Precipitation Heat Treated
AMS 4049	Aluminum Alloy, Sheet and Plate, Alclad, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (Alclad 7075; -T6 Sheet, -T651 Plate), Solution and Precipitation Heat Treated
AMS 4911	Titanium Alloy, Sheet, Strip, and Plate, 6Al - 4V, Annealed
MAM 4911	Titanium Alloy, Sheet, Strip, and Plate, 6Al - 4V, Annealed (Metric)
AMS-C-27725	Coating, Corrosion Preventive, Polyurethane for Aircraft Integral Fuel Tanks for Use to 250 °F (121 °C)
AS4491	Plastic Disposable Cartridge, Plunger, Nozzles and Cartridge Assembly

2.2 ASTM Publications:

Available from 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 297	Rubber Products - Chemical Analysis
ASTM D 412	Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension
ASTM D 471	Rubber Property - Effect of Liquids
ASTM D 573	Rubber - Deterioration in an Air Oven
ASTM D 2137	Rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics
ASTM D 2240	Rubber Property - Durometer Hardness
ASTM D 3182	Rubber - Materials, Equipment, and Procedures for Mixing Standard Compounds and Preparing Standard Vulcanized Sheets

2.3 U.S. Government Publications:

Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

A-A-59281 Compound, Solvent, for Use in Integral Fuel Tanks
MIL-PRF-87937 Cleaning Compound, Aerospace Equipment

3. TECHNICAL REQUIREMENTS:

3.1 Material:

The adhesive/sealant shall be a one-part fluorosilicone (FVMQ) compound of caulking consistency capable of curing to an elastomeric material upon exposure to air at ambient conditions.

3.1.1 Appearance: Adhesive/sealing compound shall exhibit no separation of components. Occluded gases shall not be permitted.

3.1.2 Primer: The adhesive/sealant requires the use of a one-part primer on most substrates to ensure acceptable adhesion. Unless otherwise specified by purchaser, such a primer shall be supplied by the adhesive/sealant vendor and it shall be the same primer used to qualify the adhesive/sealant. Primer shall be clear and free of particulate matter and shall impart a readily visible stain to the applied surface. Primer shall be supplied in an amount compatible with the amount of adhesive/sealant furnished (See 5.1.1), and instructions for its proper storage, handling, and use shall also be included.

3.2 Properties of Uncured Material:

Shall be as shown in Table 1, determined in accordance with specified test procedures.

TABLE 1 - Properties of Uncured Material

Paragraph	Property	Requirement	Test Method
3.2.1	Nonvolatile Content, minimum	92%	4.5.4
3.2.2	Flow	0.05 to 0.50 inch (1.3 to 12.7 mm)	4.5.5
3.2.3	Tack-Free Time, maximum	80 minutes	4.5.6

3.3 Properties of Cured Material:

Shall be as shown in Table 2, determined in accordance with specified test procedures after the adhesive/sealant has cured for not less than 14 days at standard conditions.

TABLE 2 - Properties of Cured Material

Paragraph	Property	Requirement	Test Method
3.3.1	Hardness, Durometer “A” or equivalent, minimum	35	ASTM D 2240
3.3.2	Tensile Strength, minimum	400 psi (2.76 MPa)	ASTM D 412, Die C
3.3.3	Elongation, minimum	200%	ASTM D 412, Die C
3.3.4	Specific Gravity	Preproduction Value ± 0.05	ASTM D 297
3.3.5	Peel Strength:		
3.3.5.1	To cured fluorosilicone rubber, minimum	10 pounds force/inch (1751 N/m) width	4.5.7
3.3.5.2	To specified metal substrates, minimum		4.5.8
3.3.5.2.1	7 day immersion	8 pounds force/inch (1401 N/m) width	
3.3.5.2.2	70 day immersion	5 pounds force/inch (876 N/m) width	
3.3.5.2.3	Peel strength failure mode shall be 100% cohesive within the adhesive/sealant except for bubbles, knife cuts, and other causes that are obviously not the fault of the adhesive/sealant. Adhesive failure to the wire fabric strip is acceptable if the failure occurs at or above the minimum peel strength requirement.		
3.3.6	Dry Heat Resistance:		ASTM D 573 400 °F ± 5 (204 °C ± 3) 7 days
3.3.6.1	Hardness Change, Durometer “A” or equivalent	±5	
3.3.6.2	Tensile Strength Change, maximum	-35%	
3.3.6.3	Elongation Change, maximum	-35%	
3.3.7	Aromatic Fuel Resistance:		ASTM D 471 AMS 2629, Type I
3.3.7.1	Hardness Change, Durometer “A” or equivalent	0 to -12	140 °F (60 °C) 7 days
3.3.7.2	Tensile Strength Change, maximum	-55%	
3.3.7.3	Elongation Change, maximum	-55%	
3.3.8	Repairability:	8 pounds force/inch (1401 N/m) width	4.5.9

TABLE 2 - Properties of Cured Material (Continued)

Paragraph	Property	Requirement	Test Method
3.3.8.1	Failure mode shall be 100% cohesive within the adhesive/sealant except for bubbles, knife cuts, and other causes that are obviously not the fault of the adhesive/sealant. There shall be no adhesive failure at the conditioned sealant/new sealant interface or at the sealant/metal interface. Adhesive failure to the wire fabric strip is acceptable if the failure occurs at or above the minimum strength requirement.		
3.3.9	Hydrolytic Stability:		4.5.10
3.3.9.1	Hardness Change, Durometer “A” or equivalent	0 to -5	
3.3.9.2	Tensile Strength, Change, maximum	-25%	
3.3.9.3	Elongation Change, maximum	-25%	
3.3.10	Low Temperature Brittleness:	Pass	ASTM D 2137 Method A -75 °F (-59 °C)

3.4 Quality:

The uncured adhesive/sealant, as received by purchaser, shall be uniform in quality and consistency and free of agglomerates, foreign particles, or entrapped air. The cured compound shall present an appearance of smooth homogeneity.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection:

The manufacturer of the adhesive/sealant shall supply all samples for vendor's tests and shall be responsible for the performance of all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the adhesive/sealant conforms to the specified requirements.

4.2 Classification of Tests:

4.2.1 Acceptance Tests: Tests for requirements shown in Table 3 are acceptance tests and shall be performed on each lot.

TABLE 3 - Acceptance Tests

Requirement	Reference Paragraph
Nonvolatile Content	3.2.1
Flow	3.2.2
Tack Free Time	3.2.3
Hardness	3.3.1
Tensile Strength	3.3.2
Elongation	3.3.3
Specific Gravity	3.3.4
Peel Strength (to AMS-C-27725 coated aluminum after seven days fuel/salt water exposure, only)	3.3.5.2

4.2.2 Preproduction Tests: Tests for all technical requirements are preproduction tests and shall be performed prior to or on the initial shipment of adhesive/sealant to a purchaser, when a change in ingredients and/or processing requires reapproval as in 4.4.2, and when purchaser deems confirmatory testing to be required.

4.3 Sampling and Testing:

Shall be as follows:

4.3.1 For Acceptance Tests: Sufficient adhesive/sealant shall be taken at random from each lot to perform all required tests. The number of determinations for each requirement shall be as specified in the applicable test procedure or, if not specified, not less than three.

4.3.1.1 A lot shall be all adhesive/sealant produced in a single production run from the same batches of raw materials under the same fixed conditions and presented for vendor's inspection at one time. A lot of adhesive/sealant shall not exceed 1000 pounds (454 kg).

4.3.1.2 When a statistical sampling plan has been agreed upon by purchaser and vendor, sampling shall be in accordance with such plan in lieu of sampling as in 4.3.1 and the report of 4.6 shall state that such plan was used.

4.3.2 For Preproduction Tests: As agreed upon by purchaser and vendor.

4.4 Approval:

4.4.1 Preproduction sample adhesive/sealant shall be approved by purchaser before adhesive/sealant for production use is supplied, unless such approval be waived by purchaser. Results of tests on production adhesive/sealant shall be essentially equivalent to those on the approved preproduction sample.

4.4.2 Manufacturer shall use ingredients, manufacturing procedures, processes, and methods of inspection on production adhesive/sealant which are essentially the same as those used on the approved sample. If necessary to make any change in ingredients, in type of equipment for processing, or in manufacturing procedures, vendor shall submit for reapproval a statement of the proposed changes in ingredients and/or processing and, when requested, sample adhesive/sealant. Production adhesive/sealant made by the revised procedure shall not be shipped prior to receipt of reapproval.

4.5 Test Methods:

4.5.1 Standard Conditions:

4.5.1.1 Standard laboratory test conditions shall be 77 °F (25 °C) and 50% relative humidity ± 5. Except as otherwise specified herein, all test specimens shall be prepared and cured under these conditions. In addition, flow and tack-free time shall be tested under these conditions. Other tests shall be conducted at 77 °F (25 °C) with no control on humidity necessary.

4.5.1.2 Standard Tolerances: Unless otherwise specified herein, the tolerances in Table 4 are standard tolerances.

TABLE 4 - Tolerances for Testing Conditions

Unit	Tolerance
Temperature	±2 °F (±1 °C)
Days	±2 hours
Hours	±5 minutes
Minutes	±1
Seconds	±1
Inches (mm)	±0.01 inch (±0.25 mm)

4.5.1.3 Standard Cleaning: Unless otherwise specified herein, all test panels and jigs shall be cleaned using A-A-59281 solvent and AMS 3819, Grade A, cleaning cloths.

4.5.1.4 Primer Application: When specified, a compatible primer shall be applied using primer dampened AMS 3819, Grade A, cloths. The primer shall be allowed to dry at standard conditions for not less than 60 minutes before application of adhesive/sealant. If the primer is allowed to dry more than four hours, the substrates shall be recleaned and primer reapplied.

4.5.2 Chemical Conversion Coating Application:

4.5.2.1 Coating Preparation: A chemical conversion coating conforming to AMS 2473 shall be used. It shall be prepared according to manufacturer's instructions. The pH of the resulting solution shall be adjusted to 1.5 using nitric acid.

4.5.2.2 Panel Preparation:

4.5.2.2.1 Clean by vapor or solvent degreasing using acceptable solvents.

4.5.2.2.2 Alkaline detergent clean using MIL-PRF-87937, Type I, cleaning compound or an equivalent commercially available alkaline cleaner. The cleaning may be accomplished by brushing, swabbing, or soaking the panels in the detergent solution or by combination of the above techniques. Rinse the cleaned panels in warm flowing tap water at 60 to 100 °F (16 to 38 °C) and check for cleanliness by observing for waterbreak-free surface. If a waterbreak occurs on the panel surfaces, return them to the detergent solution and repeat cleaning procedure until a waterbreak-free surface is obtained.

4.5.2.2.3 Immediately transfer the cleaned panels to a deoxidizing solution made up as shown in Table 5.

TABLE 5 - Deoxidizing Solution

Constituent	Percent by Weight
Butyl alcohol	35
Distilled or deionized water	22
Isopropyl alcohol	25
Phosphoric acid (H_2PO_4 85% by weight)	18

4.5.2.2.3.1 Acid deoxidizer conforming to AMS 1640 may also be used. Allow the panels to remain in the above solution for 3 to 5 minutes. Rinse the panels thoroughly under flowing tap water.

4.5.2.3 Coating Application (Immersion): Transfer the deoxidized panels immediately to AMS 2473 chemical conversion coating solution. Immerse the panels in the solution at standard temperature for 3 to 5 minutes or until a light straw color develops. Color development time will vary with the aluminum alloy being conversion coated. After removal from the conversion coating solution, immediately rinse thoroughly in flowing distilled or deionized water. Arrange the panels in an upright position to drain dry. Apply test materials to the conversion coated surfaces within 48 hours.

4.5.2.3.1 Mix the conversion coating solution in either 18-8 corrosion-resistant steel, polyethylene, or other compatible plastic containers. DO NOT MIX IN GLASS CONTAINERS.

4.5.3 Specimen Preparation:

4.5.3.1 For hardness, tensile strength, elongation, specific gravity, and low-temperature resistance tests, a sheet of cured adhesive/sealing compound, 0.062 inch ± 0.020 (1.57 mm ± 0.51) thick shall be prepared in accordance with ASTM D 3182 and the following:

4.5.3.1.1 Form uncured sealing compound in a mold and cure at standard conditions for 18 to 24 hours with the upper surface exposed to air.

4.5.3.1.2 Remove the sheet from the mold, lay flat, and allow to cure in still air at standard conditions for not less than 14 days.

4.5.3.2 An acceptable method of preparing cured sheets of adhesive/sealant compound is as follows:

4.5.3.2.1 Spray a mold cavity with a suitable release agent or apply a 0.002 inch (0.10 mm) thick sheet of polyethylene in the mold cavity.

4.5.3.2.2 Prepare a release paper by soaking a sheet of photographic paper in distilled water for 1 to 5 minutes at room temperature. Place this wet release paper on the mold upper surface such that the emulsion surface will face the compound. Wipe excess water from the release paper. A porous polytetrafluoroethylene-coated glass fabric may be used in lieu of the wet release paper.

4.5.3.2.3 Fill the mold cavity with sufficient adhesive/sealant compound to completely fill the cavity. Close the mold and apply approximately 50 psi (345 kPa) pressure at 77 °F (25 °C).

4.5.3.2.4 After 60 minutes, release the pressure, remove the upper surface of the mold, and carefully remove the release paper from the surface of the adhesive/sealant sheet.

4.5.3.2.5 Cure the sheet in the mold at standard conditions with the upper surface exposed to air for 18 to 24 hours.

4.5.3.2.6 Remove the test sheet from the mold, lay flat, and allow to cure in still air at standard conditions for not less than 14 days.

4.5.3.3 For other tests, prepare the specimens as specified in the applicable test procedure.

4.5.4 Nonvolatile Content: Eleven to twelve grams of adhesive/sealant compound shall be transferred, as rapidly as possible, to a previously weighed (W_1) aluminum dish approximately 2.25 inches (57.2 mm) in diameter. The adhesive/sealant shall be extruded from the plastic cartridge fitted with an AS4491, Size I, nozzle, filling the bottom of the dish to a uniform depth. The initial weight (W_2) shall be determined using an analytical balance accurate within ± 1 milligram. Immediately following weighing, the sample and dish shall be placed in a circulating-air oven preheated to 160 °F (71 °C), and allowed to dwell for 24 hours. Following dwell, the sample and dish shall be removed from the oven and allowed to cool to room temperature in a desiccator. Final weight (W_3) shall be determined on the same balance used for initial weights. All weights shall be recorded to the nearest milligram and the total nonvolatile content percentage shall be calculated as shown in Equation 1.

$$\text{Percent Nonvolatile Content} = \frac{W_3 - W_1}{W_2 - W_1} \times 100 \qquad \text{(Eq. 1)}$$

4.5.5 Flow: The flow test shall be conducted using the flow test jig shown in Figure 1. Depth of plunger is critical and shall be controlled within the tolerance during the test. Place the jig on a table with the front face upward and the plunger depressed to the limit of its travel. Extrude a sufficient amount of the adhesive/sealant into the cavity to fill the cavity and level off even with the block by scraping with a spatula. Scrape in two passes, each starting in the center and moving toward the sides of the jig. Within 10 seconds after the leveling operation, place the jig on its base and immediately advance the plunger to the limit of its forward travel. Allow the cylindrical section of adhesive/sealant formed by the plunger to flow under its own weight down the vertical surface of the jig. Make the flow measurement 30 minutes after the plunger is advanced to the limit of its forward travel. The flow shall be measured from tangent to the lower edge of the plunger to the farthest point to which the flow has advanced on the jig. Report flow to the nearest 0.05 inch (1.3 mm).

4.5.6 Tack-Free Time: Clean a metal panel or suitable substrate according to 4.5.1.3. Apply a 0.125 inch ± 0.063 (3.18 mm ± 1.60) thickness of the adhesive/sealant to the cleaned metal panel or suitable substrate. After 80 minutes at standard conditions, place a piece of polyethylene film, approximately 0.004 x 1 x 6 inches (0.10 x 25 x 152 mm), on the adhesive/sealant and hold in place with a pressure not exceeding 0.5 ounce per square inch (215 Pa) for 120 seconds. Slowly withdraw the polyethylene film at a right angle to the adhesive/sealant surface. There shall be no adhesive/sealant adhering to the film.

4.5.7 Peel Strength to Cured Fluorosilicone Rubber: Test specimens shall consist of an AMS 4045 aluminum alloy panel, (See 8.3), nominally 0.040 x 2.0 x 6.0 inches (1.02 x 51 x 152 mm), and a cured strip of AMS 3325 or AMS 3217/5 fluorosilicone rubber, nominally 0.063 x 1.5 x 12 inches (1.60 x 38 x 305 mm). Scuff sand the rubber surface to be bonded with No. 320 (46 µm) grit abrasive paper and solvent clean the sanded surface (See 4.5.1.3). Do not apply primer to the rubber surface. Clean and prime the metal panel according to 4.5.1.3 and 4.5.1.4. Apply the adhesive/sealant to a thickness of approximately 0.025 inch (0.64 mm) over a 5.0 inch (127 mm) length of the panel beginning at one end of the panel. Using a small spatula or filleting tool, apply adhesive/sealant to the sanded rubber surface such that it is made to "wet" the rubber surface. Join the rubber strip and adhesive/sealant coated panel within 10 minutes after spreading the adhesive/sealant. Press the parts firmly together with finger pressure using a progressive action starting at one end so air will be excluded from the joint. Apply pressure to the joint by lightly rolling with a small roller. Allow the specimen to cure for not less than 10 days at room temperature. After cure, cut through the rubber and bond joint to the panel surface to provide a 1.0 inch ± 0.1 (25 mm ± 2.5) wide rubber test strip. Pull back the rubber strip at an angle of 180 degrees to the panel and test in a suitable tensile testing machine using a jaw separation rate of 2 inches per minute (0.8 mm/s). The peel strength shall be determined from the numerical average of the peak loads.

4.5.8 Peel Strength to Metal Panels: Test specimens shall consist of the panels listed in Table 6 and shall include 15 to 20 mesh aluminum woven wire strips, nominally 1.0 x 12.0 inches (25 x 305 mm), utilizing 0.010 to 0.011 inch (0.25 to 0.28 mm) diameter wire. The wire fabric shall be anodized in accordance with AMS 2471. Optionally, AMS-C-27725 coating may be applied to the anodized screen. Solvent clean both the panel and woven wire fabric strip (See 4.5.1.3). Apply a compatible primer to the panels and to approximately one-half the length of the woven wire strip (See 4.5.1.4). Apply a layer of adhesive/sealant approximately 1.5 inches (38 mm) wide by 0.063 inch (1.60 mm) thick down the center of the panel. Impregnate the woven wire fabric with adhesive/sealant for approximately 5 inches (127 mm) beginning at the primed end of the fabric. Immediately apply the impregnated fabric to the adhesive/sealant coated panel taking care to exclude air from the joint. Apply adhesive/sealant to a thickness of approximately 0.063 inch (1.60 mm) over the wire fabric on the panel such that the wire fabric is completely covered. After approximately 24 hours, trim and remove the adhesive/sealant along the edges of the wire fabric. Allow the specimen to cure for not less than 14 days at standard conditions. After cure, the panels shall be completely immersed in covered glass vessels in the fluids and under the conditions listed in Table 6. After the specified exposure at 140 °F (60 °C), the panels shall be cooled in the fluid for 24 hours at room temperature. The peel strength shall be measured within 10 minutes after removal from the test fluid. The wire fabric shall be stripped back at an angle of 180 degrees to the metal panel in a suitable tensile testing machine having a jaw separation rate of 2 inches per minute (0.8 mm/s). During the peel strength testing, three cuts shall be made through the sealing compound to the panel in an attempt to promote adhesive failure at the sealant/panel interface. The cuts shall be at approximate 1-inch (25-mm) intervals. Peel strength results shall be the numerical average of the peak loads.

TABLE 6 - Peel Strength Panels

Quantity Required	Panel	Immersion medium at 140 °F ± 2 (60 °C ± 1)
4	0.040 x 2.0 x 6.0 inch (1.02 x 51 x 152 mm) AMS 4049 alclad aluminum alloy (See 8.3)	Two panels in AMS 2629, Type I, jet reference fluid for seven days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution seven days
4	0.040 x 2.0 x 6.0 inch (1.02 x 51 x 152 mm) AMS 4045 aluminum alloy (See 8.3), chemically treated in accordance with AMS 2473 (See 4.5.2)	Two panels in AMS 2629, Type I, jet reference fluid for seven days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for seven days
NOTE: The AMS 2473 coating shall not be more than 48 hours old before sealant application.		
4	0.040 x 2.0 x 6.0 inch (1.02 x 51 x 152 mm) AMS 4045 aluminum alloy (See 8.3), anodized in accordance with AMS 2471	Two panels in AMS 2629, Type I, jet reference fluid for seven days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for seven days
8	0.040 x 2.0 x 6.0 inch (1.02 x 51 x 152 mm) AMS 4045 aluminum alloy (See 8.3), anodized in accordance with AMS 2471, and coated with AMS-C-27725 corrosion-preventive coating	Two panels in AMS 2629, Type I, jet reference fluid for seven days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for seven days Two panels in AMS 2629, Type I, jet reference fluid for 70 days with fluid changed every 14 days.

TABLE 6 - Peel Strength Panels (Continued)

Quantity Required	Panel	Immersion medium at 140 °F ± 2 (60 °C ± 1)
		Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for 70 days with fluid changed every 14 days.
8	0.040 x 2.0 x 6.0 inch (1.02 x 51 x 152 mm) AMS 4911 or MAM 4911 titanium alloy	Two panels in AMS 2629, Type I, jet reference fluid for seven days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for seven days. Two panels in AMS 2629, Type I, jet reference fluid for 70 days with fluid changed every 14 days. Two panels in equal parts AMS 2629, Type I, fluid and 3% aqueous sodium chloride solution for 70 days with fluid changed every 14 days.

4.5.9 Repairability: Test specimens shall consist of AMS 4045 aluminum alloy panels (See 8.3), nominally 0.040 x 2.0 x 6.0 inches (1.02 x 51 x 152 mm), anodized in accordance with AMS 2471, coated with AMS-C-27725 corrosion-preventive coating, and shall include 15 to 20 mesh aluminum woven wire strips, nominally 1.0 x 12.0 inches (25 x 305 mm), utilizing 0.010 to 0.011 inch (0.25 to 0.28 mm) diameter wire. The wire fabric shall be anodized in accordance with AMS 2471. Optionally, AMS-C-27725 coating may be applied to the anodized screen. Solvent clean and prime the test panels in accordance with 4.5.1.3 and 4.5.1.4. Two panels each shall be coated with each of the materials currently supplied to this specification and with the adhesive/sealant being tested. The adhesive/sealant shall be approximately 1.5 inches (38 mm) wide by 0.063 inch (1.60 mm) thick down the center of the panel. After a standard cure, one panel of each adhesive/sealant compound shall be exposed to AMS 2629, Type I, jet reference fluid for three days at 140 °F (60 °C) followed by seven days air aging at 250 °F (121 °C).