



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

AMS 1320

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Revised

DECAL ADHESIVE REMOVER

1. SCOPE:

1.1 Form: This specification covers a solvent-type remover for decal adhesives in the form of a liquid.

1.2 Application: Primarily for removing decal adhesive residue from painted surfaces, metal, plastics, and interior decor of aircraft.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications (AMS) and Aerospace Recommended Practices (ARP) shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

AMS 4045 - Aluminum Alloy Sheet and Plate, 5.6Zn - 2.5Mg - 1.6Cu - 0.26Cr
(7075; -T6 Sheet, -T651 Plate)

AMS 4049 - Aluminum Alloy Sheet and Plate, Alclad, 5.6Zn - 2.5Mg - 1.6Cu - 0.26Cr
(Alclad 7075; -T6 Sheet, -T651 Plate)

2.1.2 Aerospace Recommended Practices:

ARP 1512 - Corrosion of Aluminum Alloys by Aircraft Maintenance Chemicals, Sandwich Test

2.2 ASTM Publications: Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D56 - Flash Point by Tag Closed Tester

ASTM F484 - Stress Cracking of Acrylic Plastics in Contact with Liquid and Semi-Liquid Compounds

ASTM F485 - Effects of Cleaners on Unpainted Aircraft Surfaces

ASTM F502 - Effects of Cleaning and Chemical Maintenance Materials on painted Aircraft Surfaces

ASTM F503 - Preparing Aircraft Cleaning Compounds, Liquid Type, for Storage Stability Testing

2.3 Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120, except as specified in 2.3.4.

2.3.1 Federal Specifications:

QQ-A-250/12 - Aluminum Alloy 7075, Plate and Sheet

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

SAE Technical Board rules provide that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade or their use by governmental agencies is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

2.3.2 Military Specifications:

MIL-P-25690 - Plastic, Sheets and Parts, Modified Acrylic Base, Monolithic, Crack Propagation Resistant

2.3.3 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

2.3.4 U. S. Department of Labor, Occupational Safety and Health Administration Forms: Available from regional offices of U. S. Department of Labor, Bureau of Labor Standards.

OSHA Form 20 - Material Safety Data Sheet

3. TECHNICAL REQUIREMENTS:

3.1 Material: Shall consist of a liquid solvent or remover meeting the requirements of 3.2.

3.1.1 The product shall not be hazardous as defined in OSHA regulations.

3.1.2 The concentrated product, diluted in accordance with manufacturer's recommendations, shall produce a homogeneous solution, determined by inverting a 100 mL graduated cylinder containing 100 mL of the diluted product three times and visually examining for homogeneity.

3.2 Properties: The remover shall conform to the following requirements; tests shall be performed in accordance with specified test methods on the product in concentrated form and at use dilution recommended by the manufacturer:

3.2.1 Flash Point: Shall be not lower than 60°C (140°F), determined in accordance with ASTM D56.

3.2.2 Sandwich Corrosion of Metallic Surfaces: Specimens of AMS 4045 or QQ-A-250/12 and AMS 4049 or QQ-A-250/13 aluminum alloy, after test, shall show a rating not worse than 1, determined in accordance with ARP 1512.

3.2.3 Effect on Plastics: The product shall not craze, stain, or discolor MIL-P-25690 stretched acrylic plastic, determined in accordance with ASTM F484. The product, likewise, shall not craze, stain, or discolor polycarbonate or polysulfone plastics, determined in accordance with test procedure specified in ASTM F484 on specimens stressed for 72 hr ± 1 to an outer fiber stress of 3,000 psi (21 MPa).

3.2.4 Effect on Painted Interior Surfaces: The product shall neither decrease the hardness of films of polyurethane paint or other paint specified by purchaser nor shall it produce any streaking, discoloration, or blistering of the paint film, determined in accordance with ASTM F502.

3.2.5 Effect on Unpainted Interior Surfaces: The product, tested in accordance with ASTM F485, shall neither produce streaking nor leave any stains which require polishing to remove from AMS 4045 or QQ-A-250/12 and AMS 4049 or QQ-A-250/13 aluminum alloys.

3.2.6 Storage Stability: The product, tested in accordance with ASTM F503, shall show no evidence of precipitation, stratification, layering, or separation, shall be restorable to its original appearance by moderate agitation, and shall conform to all other technical requirements of this specification after the storage stability period specified in ASTM F503.

3.2.7 Performance: The product, when used in accordance with the manufacturer's recommendations, shall remove decal adhesives from the interior surfaces of aircraft without leaving any visible residue.

- 3.3 Quality: The product, as received by purchaser, shall be homogeneous, uniform in color, and free from skins and lumps and from foreign materials detrimental to usage of the product.

4. QUALITY ASSURANCE PROVISIONS:

- 4.1 Responsibility for Inspection: The vendor of the product shall supply all samples and shall be responsible for performing all required tests. Results of such tests shall be reported to the purchaser as required by 4.5. Purchaser reserves the right to perform such confirmatory testing as he deems necessary to ensure that the product conforms to the requirements of this specification.

- 4.2 Classification of Tests: Tests to determine conformance to all technical requirements of this specification are classified as acceptance tests and as preproduction tests and shall be performed on each lot of product.

- 4.2.1 For direct U.S. Military procurement, substantiating test data and, when requested, preproduction test material shall be submitted to the cognizant agency as directed by the procuring activity, the contracting officer, or the request for procurement.

- 4.3 Sampling: Sufficient remover shall be taken at random from each lot to perform all required tests. The number of tests for each requirement shall be as specified in the applicable test procedure or, if not specified therein, not less than two. A lot shall be all remover produced in a single production run from the same batches of raw materials under the same fixed conditions and submitted for vendor's inspection at one time.

4.4 Approval:

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

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

- 4.5 Reports: Unless waived by purchaser, the vendor of the adhesive remover shall furnish with each shipment three copies of a report showing the results of tests to determine conformance to the technical requirements of this specification. This report shall include the purchase order number, material specification number, manufacturer's identification, lot number, and quantity.

- 4.5.1 Reports of preproduction test results shall include a completed copy of OSHA Form 20 material Safety Data Sheet, or equivalent covering product formulation. All requests for modification of formulation shall be accompanied by a similar form for the proposed formulation.

- 4.6 Resampling and Retesting: If any sample used in the above tests fails to meet the specified requirements, disposition of the remover may be based on the results of testing three additional samples for each original nonconforming sample. Failure of any retest sample to meet the specified requirements shall be cause for rejection of the remover represented and no additional testing shall be permitted. Results of all tests shall be reported.

5. PREPARATION FOR DELIVERY:

5.1 Packaging and Identification:

- 5.1.1 Adhesive remover shall be packaged in suitable containers of a size agreed upon by purchaser and vendor.