

AEROSPACE MATERIAL SPECIFICATION

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Superseding AMS 1725B	

Skin Protective Compound
Chemical Barrier

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1. SCOPE:

- 1.1 Form: This specification covers three types of semi-solid skin protective compounds in the form of barrier creams.
- 1.2 Application: Primarily for the protection of skin from exposure to aircraft maintenance chemicals.
- 1.3 Classification: The three types of protective compounds are classified as follows:
- Type I - Stain, adhesion, and abrasion resistant
 - Type II - Solvent resistant
 - Type III - Water-miscible chemicals (acid and alkali.) resistant

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications and Aerospace Recommended Practices shall apply. The applicable issue of other documents shall be as specified in AMS 2350 except that the issue of CTFA publications in effect on date of invitation to bid or request for proposal shall apply.

- 2.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096 .

2.1.1 Aerospace Material Specifications:

- AMS 2350 - Standards and Test Methods
- AMS 2825 - Material Safety Data Sheets
- AMS 4049 - Aluminum Alloy Sheet and Plate, Alclad, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (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 E70 - pH of Aqueous Solutions with the Glass Electrode
- ASTM F483 - Total Immersion Corrosion Test for Aircraft Maintenance Chemicals
- ASTM F484 - Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds

2.3 U.S. Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Federal Specifications:

O-T-236 - Tetrachloroethylene (Perchloroethylene); Technical Grade
VV-C-846 - Cutting Fluids: Emulsifiable Oil

2.3.2 Military Specifications:

MIL-C-15203 - Coating Compound, Bituminous Emulsion
MIL-P-83310 - Plastic Sheet, Polycarbonate, Transparent

2.3.3 Military Standards:

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

2.3.4 Federal Food, Drug, and Cosmetic Act, and Regulations Promulgated Thereunder:

Federal Hazardous Substances, Labeling Act

2.4 CTFA Publications: Available from Cosmetic, Toiletry, and Fragrance Association, Inc., 1625 Eye Street Northwest, Washington, DC 20006.

A Guideline for the Determination of Adequacy of Preservation of Cosmetics and Toiletry Formulations

3. TECHNICAL REQUIREMENTS:

3.1 Material: Shall be optional with the manufacturer, shall conform to standards set forth in the Federal Food, Drug, and Cosmetic Act for skin protective compounds, and shall meet the requirements of 3.2.

3.2 Properties: The product shall conform to the following requirements; tests
Ø shall be performed in accordance with specified test methods on the product supplied:

3.2.1 Consistency: Shall be such that the product in the range 5° - 40°C (40° - 100°) can be applied to the skin to form a flexible, adhering film which shall be neither sticky nor greasy, determined in accordance with 4.5.1.

3.2.2 Removability: The compound shall be removable from the skin with soap and warm water, determined in accordance with 4.5.2,

- 3.2.3 Odor: The compound shall not present any objectionable odor during and after application to the skin, determined in accordance with 4.5.3.
- 3.4.2 pH: Shall be within the range 6.0 - 8.5, determined in accordance with ASTM E70.
- 3.2.5 Viscosity: Shall be not less than 200,000 cps (200 Pa•ms), determined in accordance with 4.5.4.
- 3.2.6 Stability: The compound shall remain homogeneous without evidence of separation under normal storage conditions from -18° to +52°C (0° to 125°F), determined in accordance with 4.5.5.
- 3.2.7 Barrier Protection: The compound shall evince no complete penetration, within 30 min. after application, to the applicable challenging agents, determined in accordance with 4.5.6.
- 3.2.8 Toxicity:
- 3.2.8.1 Acute Oral Toxicity: Shall be not less than 16 mL/kg as evaluated on rats, determined in accordance with Federal Hazardous Substances Act, 16CFR, 1500.3.
- 3.2.8.2 Eye Irritation: The compound shall not be an ocular irritant as evaluated on rabbits, determined in accordance with Federal Hazardous Substances Act, 16CFR, 1500.41.
- 3.2.8.3 Skin Irritation: The compound shall not be a primary irritant as evaluated on rabbits, determined in accordance with Federal Hazardous Substances Act, 16CFR, 1500.42.
- 3.2.9 Adequacy of Preservative System: The compound shall not contain more than 10 microorganisms per gram of compound, determined in accordance with a guideline for the determination of preservation of cosmetic and toiletry formulations (See 2.4).
- 3.2.10 Corrosion of Metal Surfaces:
- 3.2.10.1 Sandwich Corrosion: Specimens of AMS 4049 alclad aluminum alloy, after test, shall show a rating not worse than 1, determined in accordance with ARP 1512.
- 3.2.10.2 Total Immersion Corrosion: The compound shall neither show evidence of corrosion of the panels nor cause a weight change greater than 0.3 mg/cm² per 24 hr for any panel of AMS 4049 alclad aluminum alloy, determined in accordance with ASTM F483.