



Product Lab Performance

TEST REQUIREMENTS FOR MIL-C-81309E Type III and Amd 3 Type II

| CHARACTERISTICS | REQUIREMENTS | TEST PARA... | FOUND |
|--|--|--------------|--------------------------|
| • Minimum Flash Point | 60°C (140°F) | 4.7.1 | Conforms (175°) |
| • Synthetic Sea Water (Sulfurous Acid Spray) | Type II: No visible corrosion of carbon steel after 2 cycles | 4.7.2 | Conforms |
| • Synthetic Sea Water Displacement | No visible corrosion | 4.7.3 | Conforms |
| • Removability | Not more than 3 cycles to remove | 4.7.4 | Conforms |
| • Abrasives | None present | 4.7.5 | Conforms |
| • Maximum Film Thickness | Type II: 0.0005 inches | 4.7.6 | Conforms |
| • Sprayability | Sprayable | 4.7.7 | Conforms |
| • Corrosivity | No visible pitting, etching or dark discoloration. No weight change (milligram/cm ²) greater than 0.5 for magnesium, cadmium and zinc, nor greater than 0.2 for aluminum, copper and brass | 4.7.8 | Conforms |
| • Staining | No visible evidence of staining or other deleterious effects | 4.7.9 | Conforms |
| • Minimum dielectric breakdown | 25,000 volts | 4.7.10 | Conforms 38,000 volts |
| • Mixability of compounds | No evidence of separation | 4.7.11 | Conforms |
| • Lubricity of compounds | Less than 0.20 | 4.7.12 | Conforms |
| • Effect on electric components | No significant change in capacitance, dissipation factor and conductance of coil forms and capacitors in the Q and amount of capacitance to resonate the coil. No significant change in the resistance of resistors. A change greater than ½ the allowed tolerance of the component shall be considered as significant | 4.7.13 | Conforms |
| • Effect on electric connectors | No significant increase in resistance between connected pins or decrease in resistance between adjacent pins | 4.7.14 | Conforms |

ADDITIONAL AEROSPACE TEST DATA

| TEST IDENTITY | TEST METHOD | RESULTS |
|--|-------------------------|-----------------|
| Douglas Aircraft CSD #1 | | |
| • Painted Surfaces | ASTM F 502 | Conforms |
| • Residue Surfaces | ASTM F 485 | Conforms |
| • Sandwich Corrosion Test | | Conforms |
| • Stress Cracking Acrylic Plastics | ASTM F 484 | Conforms |
| • Immersion Corrosion Test | ASTM F 483 | Conforms |
| • Cadmium Removal Test | ASTM F 1111 | Conforms |
| Douglas Aircraft DMS 2150 | | |
| • Film Characteristic | | Conforms |
| • Product Composition | | Conforms |
| • Appearance | | Conforms |
| • Toxicity | | Conforms |
| • Flash Point | ASTM D 56 | Conforms |
| • Nonvolatile Content | ASTM D 1644A | Conforms |
| • Viscosity | ASTM D 445 | Conforms |
| • Salt Fog Exposure | ASTM B 117 | Conforms |
| • Water Displacement | | Conforms |
| • Removability | | Conforms |
| • Storage Stability | | Conforms |
| BMS 3-23E | | |
| Table I | | |
| • Flash Point | ASTM D 93 | Pass |
| • Sprayability | MIL-C-1617D | Pass |
| • Low-Temperature Adhesion | MIL-C-1617D | Pass |
| • Nonvolatile Content | ASTM D 1644 | Pass |
| • Detectability | | Pass |
| • Removability | | Pass |
| • Storage Stability | | Pass |
| • Drying Time | | Pass |
| • Compatibility with Cadmium | | Pass |
| Table II | | |
| • Water Displacement Ability | MIL-C-1617 D | Pass |
| • Viscosity | | |
| • Corrosion Inhibiting Characteristics | FED-STD 791 (ASTM G 34) | Pass |
| • Functional Penetration Test | | Pass |
| Volatile Organic Content | | |
| • California Air Quality Compliant | ASTM 2369 | >166.9g/L |
| Misc. | | |
| • Humidity Resistance | AMS 3066B | Conforms |
| • Hydrogen Embrittlement | ASTM F 519 | Conforms |
| • Polyimide Insulated Wire | MIL-C-87937 B | Conforms |
| Airbus Industrie TN A 007.10138 | | |
| • Elsan / Racasan Toilet Fluid | | Conforms |
| • Turco 5854-2L | | Conforms |
| • Orange Juice | | Conforms |
| • Coke | | Conforms |
| • Coffee | | Conforms |
| • De-icing Fluid NATO S.745 | | |
| • 3:4 | | Conforms |
| • 1:2 | | Conforms |
| • 1:4 | | Conforms |
| • 5% Sodium Hydroxide (NaOH) | | Light Oxidation |
| • 5% Hydrochloric Acid (HCl) | | Conforms |
| • 5% Nitric Acid (HNO ₃) | | Conforms |
| • 10% Acetic Acid (CH ₃ COOH) | | Conforms |
| • 45% Ethanol | | Conforms |

ACF-50 has endorsements or approvals from 29 airframe OEM's and meets these industry anti-corrosion performance requirements.



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