

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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