

NavGuard[™]

ULTRA-THIN FILM CORROSION PREVENTIVE COMPOUND MIL-PRF-81309F TYPES I & II CLASS 1

Part Numbers

NavGuard I (With Mildew Inhibitor) 30103, 30104, 30105, 30107, 30108

NavGuard II (General Purpose Grade) 30203, 30204, 30205, 30207, 30208

MIL-PRF-81309G Test Property	Test Method	Type I Result	Type II Result
Acid Salt Fog Protection	4.6.1	Carbon Steel > 2 cycles*	Carbon Steel > 2 cycles*
Application	4.6.2	Sprayed satisfactorily with no froth, bubbling, or excessive runoff	Sprayed satisfactorily with no froth, bubbling, or excessive runoff
Compatibility with MIL-PRF-32033	Observation	No sedimentation, separation or reaction	No sedimentation, separation or reaction
Compatibility with polyimide and PVC wiring insulation	4.6.3	No cracking or degradation of insulation following exposure; no dielectric leakage	No cracking or degradation of insulation following exposure; no dielectric leakage
Corrosivity	Magnesium	< 0.1 mg/cm ²	< 0.1 mg/cm ²
	Cadmium	0.3 mg/cm ²	0.3 mg/cm ²
	Zinc	< 0.1 mg/cm ²	< 0.1 mg/cm ²
	Aluminum	< 0.1 mg/cm ²	< 0.1 mg/cm ²
	Brass	< 0.1 mg/cm ²	< 0.1 mg/cm ²
	Copper	< 0.1 mg/cm ²	< 0.1 mg/cm ²
Dielectric strength	ASTM D877 / D877M - 13	> 28,000 volts	> 28,000 volts
Effect on acrylic plastic and polycarbonate	ASTM F484	No crazing, cracking, staining < 1 pencil hardness change after 24 hours; No crazing, cracking, staining, streaking, discoloration, blistering	No crazing, cracking, staining < 1 pencil hardness change after 24 hours; No crazing, cracking, staining, streaking, discoloration, blistering
Effect on urethane paint	ASTM F502	Uniform, light amber simulated corrosion sports visible by unaided eye	Uniform, light amber simulated corrosion sports visible by unaided eye
Film appearance	4.6.8	0.5 mil	0.5 mil
Film thickness	4.6.9	65°C / 149°F	65°C / 149°F
Flash point	ASTM D93	< 0.18	< 0.18
Friction coefficient	4.6.10	> 90% wetted	> 90% wetted
Functional penetration	4.6.11	No embrittlement of cadmium plated 4340 steel	No embrittlement of cadmium plated 4340 steel
Hydrogen embrittlement	SAE-AMS-S-5000	>336 hours	> 336 hours
Neutral salt fog protection	ASTM B117	59.1	59.1
Non-volatile content	4.6.14	Completely removable with MIL-PRF-680 Type II or MIL-PRF-85570 Type II	Completely removable with MIL-PRF-680 Type II or MIL-PRF-85570 Type II
Removability	4.6.16	Meets all specification requirements or 2 years after manufacture date	Meets all specification requirements or 2 years after manufacture date
Storage stability	4.6.17	No visible corrosion	No visible corrosion
Water displacement	4.6.18		

*Unacceptable corrosion is not more than three rust spots less than 1 mm in diameter, excluding the area within 1/8 inch of the panel edges or hole

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