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SMI/REF: 2007-941

Product: **BACOBAN FOR AEROSPACE (ready for use)** *(received 06-Nov-2020)*

Dilution: As received

AMS 1453A (2015-07)
DISINFECTANT CLEANER FOR AIRCRAFT INTERIOR
General Purpose Liquid

3.2.1.1	Sandwich Corrosion	Conforms
3.2.1.2	Total Immersion Corrosion	Conforms
3.2.1.3	Low-Embrittling Cadmium Plate	Conforms
3.2.2	Hydrogen Embrittlement	Conforms
3.2.3	Flash Point	Conforms
3.2.4	Effect on Plastics	Conforms
3.2.5	Effect on Painted Surfaces	Conforms
3.2.6	Effect on Unpainted Surfaces	Conforms
3.2.7	Long Term Storage Stability	Not performed
~~3.2.8~~	~~Performance~~	Excluded
3.2.9	Accelerated Storage Stability	Does not conform

Respectfully submitted,

Patricia D. Viani, SMI Inc.

3.2 Properties: Disinfectant shall conform to the following requirements; tests shall be performed in accordance with specified test methods on the disinfectant supplied in concentrated form and at use dilution recommended by the manufacturer as hereinafter specified. Diluent shall be ASTM D 1193, Type IV, water.

3.2.1 Corrosion of Metal Surfaces

3.2.1.1 Sandwich Corrosion: Specimens, after test, shall not show corrosion worse than control panels, using ASTM D 1193, Type IV, water, determined in accordance with ASTM F 1110.

	2024-T3 Bare Anodized	2024-T3 Alclad	7075-T6 Bare Anodized	7075-T6 Alclad
AS RECEIVED	**1**	**1**	**1**	**1**
CONTROL	1	1	1	1

Result Conforms

3.2.1.2 Total Immersion Corrosion: The product shall neither show evidence of corrosion nor cause a weight change of any test panel greater than shown in Table 1, determined in accordance with ASTM F 483.

PANEL	Allowable Weight Change mg/cm^2/24hrs	RESULTS
		AS RECEIVED
AMS 4037 Aluminum anodized per AMS 2470	0.3	**+ 0.05**
AMS 4049 Clad Aluminum	0.3	**+ 0.05**
AMS 4911 Titanium	0.1	**+ 0.01**
AMS 5045 Carbon Steel	0.8	**+0.06**

"+" indicates weight gain
****Pitting / corrosion***

Result Conforms

3.2.1.3 Low-Embrittling Cadmium plate: Test panels coated with low-embrittling cadmium plate shall not show a weight change greater than 0.3 mg/cm^2/24hrs per 24 hours, determined in accordance with ASTM F 1111.

As received: 0.03 mg/cm^2/24 hours

Result Conforms

3.2.2 Hydrogen Embrittlement: The product shall be non-embrittling, determined in accordance with ASTM F 519 utilizing Type 1a, 1c, or 2a specimens, cadmium plated in accordance with MIL-STD-870, Class 1 Type I. Type 1a and Type 1c specimens shall be loaded to 45% of the predetermined notch fracture strength, and Type 2a specimens loaded to 80% of the yield strength. The entire 2a stressed specimen, or just the notched area of the 1a and 1c stresses specimen, shall be immersed continuously in the solution under test for 150 hours at a temperature between 68 to 86°F (20 to 30°)

Specimens: Type 1c, cadmium plated per MIL-STD-870 Class 1 Type I
Test temperature: 68°F (20°C)

As received: No failure occurred within 150 hours

Result Conforms

3.2.3 Flash Point: Shall not be lower than 60°C (140°F), determined in accordance with ASTM D 56.

As received: No flash to 140 °F

Result Conforms

3.2.4 Effect on Plastic: The product shall not craze, stain, or discolor MIL-P-25690 stretched acrylic plastic, determined in accordance with ASTM F 484.

MIL-P-25690 stretched acrylic plastic
As received: No crazing evident

Result Conforms

3.2.4.1 Product shall not craze, stain or discolor AMS-P-83310 polycarbonate plastic, determined in accordance with procedures in ASTM F484 except the specimens shall be stressed for 30 minutes ± 1 to an outer fiber stress level of 2000 psi (13.8 MPa).

AMS-P-83310 polycarbonate plastic
As received: No crazing evident

Result Conforms

3.2.5 Effect on Painted Surfaces: The product shall neither decrease the hardness of the paint film by more than two pencil hardness levels, nor shall it product any streaking, discoloration, or blistering of the paint film, determined in accordance with ASTM F 502.

As received: No hardness change; no discolor or blistering

Result Conforms

3.2.6 Effect on Unpainted Surfaces: The product tested in accordance with ASTM F485, shall neither produce streaking nor leave any stains which would require polishing to remove.

As received: No streaks nor stains

Result Conforms

3.2.7 Long Term Storage Stability: The product, tested in accordance with ASTM F1104, shall be restorable to its original appearance by moderate shaking, and shall meet all technical requirements after the storage stability period of 1 year.

Result Not performed

3.2.8 ~~Performance: The product, used in accordance with label instructions, shall remove normally accumulated soils from the surfaces being cleaned and shall leave those surfaces in a disinfected or sanitized condition without any visible residue.~~

Result Excluded

3.2.9 Accelerated Storage Stability: Disinfectant shall remain homogeneous and shall show no evidence of layering, separation, settling or crystallization, determined in accordance with 3.2.9.1 and 3.2.9.2.

3.2.9.1 Elevated Temperature: One 6-oz (175-mL) sample of the product shall be placed in 8-oz (250-mL) clear glass bottles and sealed and, from that time until test is completed, shall be handled so as to minimize movement of the sample. The jar shall be exposed for 120 hours ± 1 at 122°F ± 5 (50°C ± 3). At the end of the 120-hour period, remove the sample to a room-temperature environment, and allow to cool completely and examine for conformance to 3.2.9.

As received: No evidence of layering, separation, settling or crystallization.

Result Conforms

3.2.9.2 Cold Temperature: One 6-oz (175-mL) sample of the product shall be placed in 8-oz (250-mL) clear glass bottles and sealed and, from that time until test is completed, shall be handled so as to minimize movement of the sample. The jar shall be exposed for 120 hours ± 1 at 14°F ± 5 (-10°C ± 3). At the end of the 120-hour period, remove the sample to a room-temperature environment, and allow to thaw completely and examine for conformance to 3.2.9.

As received: Evidence of layering / separation.

Result Does not conform