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Attn: David Lessley
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Date: 06-Oct-2009
SMI/REF: 0906-514

Product: **HOTSY AERO ONE – AIRCRAFT CLEANER** (received 21-Sep-2009)

Dilution: As received and 120:1

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AMS 1526C

Cleaner for Aircraft Exterior Surfaces
Water-Miscible, Pressure-Spraying Type

3.2.1.1	Sandwich Corrosion	<u>Conforms</u>
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3.2.5	Effect on Painted Surfaces	<u>Conforms</u>
3.2.6	Effect on Unpainted Surfaces	<u>Conforms</u>
3.2.7	Storage Stability	<u>Not performed</u>

Respectfully submitted,



Patricia D. Viani, SMI Inc.

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3.2.1.1 Sandwich Corrosion: Specimens, after test, shall show a rating not worse than 1 determined in accordance with ASTM F 1110.

	2024-T3 Anodized	2024-T3 Alclad	7075-T6 Anodized	7075-T6 Alclad
AS RECEIVED	1	1	1	1
DILUTE	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 of the panels nor cause a weight change of any test panel greater than the following, determined in accordance with ASTM F 483:

PANEL	Allowable Weight Change mg/cm ² /24hrs	RESULTS mg/cm ² /24hrs	
		AS RECEIVED	DILUTE 1:25
AMS 4037 Aluminum Alloy, anodized per AMS 2470	0.3	+0.03*	0.01
AMS 4041 Aluminum Alloy	0.3	0.01	0.08
AMS 4049 Aluminum Alloy	0.3	0.01	0.06
AMS 4376 Magnesium Alloy, dichromate treated as in AMS 2475	0.2	0.01	0.04
AMS 4911 Titanium Alloy	0.1	0.01*	0.01
AMS 5045 Carbon Steel	0.8	0.01	0.01

**Discolored; no visible corrosion.*

Result Conforms

3.2.1.3 Low-Embrittling Cadmium Plate: Panels coated with low-embrittling cadmium plate shall not show a weight change greater than 0.3 mg/cm² per 24 hours, determined in accordance with ASTM F 1111.

As received: 0.01 mg/cm²
Dilute: 0.29 mg/cm²

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. 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 stressed specimen, shall be immersed continuously in the solution under test for 150 hours at a temperature between 20°C - 30°C (68 – 86°F).

Specimens: Type 1c, cadmium plated

As received: No failures within 150 hours.
Dilute: No failures within 150 hours.

Result Conforms

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

As received: No flash point observed to 141°F.

Result Conforms

3.2.4 Effect on Transparent Acrylic Plastics: There shall be no crazing or staining of stretched MIL-P-25690 plastic, determined in accordance with ASTM F 484.

As received: No crazing or staining
Dilute: No crazing or staining

Result Conforms

3.2.5 Effect on Painted Surfaces: The product shall neither decrease the hardness of the paint film by more than 2 pencil hardness levels nor shall it produce any streaking, discoloration or blistering of the paint film, determined in accordance with ASTM F 502.

As received: No hardness change; no streaking, discoloration or blistering
Dilute: No hardness change; no streaking, discoloration or blistering

Result Conforms

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3.2.6 Effect on Unpainted Surfaces: The product, tested in accordance with ASTM F 485, shall neither produce streaking nor leave any stains requiring polishing to remove.

AMS 4911: As received: No streaking or stains
Dilute: No streaking or stains

AMS 4049: As received: No streaking or stains
Dilute: No streaking or stains

Result Conforms

3.2.7 Storage Stability: The product shall neither show separation from exposure to heat or cold nor show an increase in turbidity greater than a control sample equally diluted to use concentration with ASTM D 1193, Type IV water, determined in accordance with ASTM D 1105.

Requires 12 months of storage

Result Not performed