

# SMI, Inc.

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Attn: Dexter Backus  
G. Backus Representations, Inc  
2830 Sabalwood Court  
Delray Beach, FL 33445

Date: 03-Sep-2014

SMI/REF: 1407-915<sub>III</sub>

Product: VITAL OXIDE (received 07-Aug-2014)

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Dilution: As received (additional Sealant test performed at 9:1 dilution)

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**Boeing D6-7127 Rev P incorporating PDD 6-8 (21 June 12)**  
CLEANING INTERIORS OF COMMERCIAL  
TRANSPORT AIRCRAFT  
Category: Disinfectants

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11.3.1	Sandwich Corrosion	<u>Conforms</u>
11.3.2	Immersion Corrosion Test	<u>Conforms</u>
11.3.3	Rubber Test	<u>Conforms</u>
11.3.4	Sealant Test (product tested as received)	<u>Does not conform</u>
11.3.4	Sealant Test (product tested at 9:1 dilution)	<u>Conforms</u>
11.3.4	Sealant Test (modified per client's request)	<u>Informational</u>
11.3.5	Painted Surface Test	<u>Conforms</u>
11.3.6	Tedlar Surface Test	<u>Conforms</u>
11.3.7	Vinyl Surface Test	<u>Conforms</u>
11.3.8	Fabric and Carpet Test	<u>Conforms</u>
11.3.9	Leather and Naugahyde Test	<u>Conforms</u>
11.3.10	Flash Point Test	<u>Informational</u>
11.3.11	Polycarbonate Craziing Test	<u>Conforms</u>

Respectfully submitted,



Patricia D. Viani, SMI Inc.

Client: G. Backus Representations, Inc  
 Product: VITAL OXIDE  
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 Boeing D6-7127

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11.3.1 Sandwich Corrosion Test: Corrosion in excess of that on the control panel constitutes failure when tested in accordance with Section 12.1.

	Clad 7075-T6 Aluminum (AMS 4049)	Bare 7075-T6 Aluminum (AMS 4045) anodized per Mil-A-8625 Type I
<b>PRODUCT</b>	<b>1</b>	<b>1</b>
Control	1	1

Result Conforms

11.3.2 Immersion Corrosion Test: The average weight change of each test specimen shall not exceed  $\pm 10$  mg in a 24 hour immersion period when tested in accordance with Section 12.2.

	<b>PRODUCT</b> (Loss per 1"x2" panel)	<b>RESULT</b>
Clad 2024-T3 Aluminum (QQ-A-250/5)	<b>0.8 mg</b>	<b>PASS</b>
Bare 2024-T3 Aluminum (QQ-A-250/4) alodined per MIL-C-5541	<b>+ 0.4 mg</b>	<b>PASS</b>
Bare 2024-T3 Aluminum (QQ-A-250/4) anodized per MIL-A-8625 Ty I	<b>0.4 mg</b>	<b>PASS</b>
Bare 7178-T6 Aluminum (QQ-A-250/14) anodized per MIL-A-8625 Ty I	<b>+ 0.3 mg</b>	<b>PASS</b>

Result Conforms

11.3.3 Rubber Test: Changes in properties shall not exceed the following, when tested in accordance with Section 12.3:

PROPERTY	MAX. CHANGE ALLOWED	PRODUCT
Tensile Strength	25 % loss	< 1%
Elongation	25 % loss	< 15%
Volume	$\pm 15\%$ change	< 1%

24 hour immersion at room temperature.

Result Conforms

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11.3.4 Sealant Test: The sealant shall not lift at the edges or lose adhesion when tested in accordance with Section 12.4.

**Sealant: BMS 5-95**

**As received: Sealant softened, lifts at edges.**

Result Does not conform

**9:1 DILUTION (10%): No softening or loss of adhesion.**

Result Conforms

**Sealant Test: modified per client's request**

*Sealant coated panel was immersed in product, as received, for 120 hours (instead of  $70 \pm 2$  hours) at room temperature (instead of 120°F).*

**Sealant: BMS 5-95**

**As received: No softening or loss of adhesion.**

Result Informational

11.3.5 Painted Surface Test: When tested in accordance with Section 12.5 and Section 7c., the following is required:

- a. Paint film hardness shall not decrease more than 2 pencil hardnesses.
- b. Greater than minimal color change or staining constitutes test failure.

Application method: paragraph 12.5.2(b).

**PRODUCT: Paint film hardness: 0 pencil hardness change  
Color change: none**

Result Conforms

11.3.6 Tedlar Surface Test: When tested in accordance with Section 12.6 and Section 7c., the following is required:

- a. Scratching of exposed specimens constitutes test failure.
- b. Greater than minimal color change or staining constitutes test failure.

Application method: paragraph 12.6.2(b)

**PRODUCT: No scratching, color change, or staining of specimens.**

Result Conforms

11.3.7 Vinyl Surface Test: When tested in accordance with Section 12.7 and Section 7c., the following is required:

- a. Cracking, or brittleness of exposed specimens constitutes test failure.
- b. Greater than minimal color change or staining constitutes test failure.

Application method: paragraph 12.7.2(b)

**PRODUCT: No scratching, color change, or staining of specimens.**

Result Conforms

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11.3.8 Fabric and Carpet Test: When tested in accordance with Section 12.8 and Section 7c., the following is required:

Application method: paragraph 12.8.2(b)

Upholstery:

- a. Greater than minimal color change or staining constitutes test failure.  
**No color change or staining**

Result Conforms

- b. Flammability: maximum values:

PROPERTY	MAXIMUM VALUE	PRODUCT
Extinguishing Time	15 seconds	<b>4 seconds</b>
Burn Length	8 inches	<b>6 inches</b>
Drip Extinguish Time	5 seconds	<b>&lt; 3 seconds</b>

Result Conforms

Carpet:

- a. Greater than minimal color change or staining constitutes test failure.  
**No color change or staining**

Result Conforms

- b. Flammability: maximum values:

PROPERTY	MAXIMUM VALUE	PRODUCT
Extinguishing Time	15 seconds	<b>&lt; 3 seconds</b>
Burn Length	8 inches	<b>4 inches</b>
Drip Extinguish Time	5 seconds	<b>&lt; 3 seconds</b>

Result Conforms

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11.3.9 Leather and Naugahyde Test: When tested in accordance with Section 12.9 and Section 7c., the following is required:

Application method: paragraph 12.9.2(b)

*Leather:*

- a. *Scratching or brittleness of exposed specimen constitutes test failure.  
**No scratching or brittleness of exposed specimen.***
- b. *Greater than minimal color change or staining constitutes test failure.  
**No color change or staining.***

Result Conforms

*Naugahyde:*

- a. *Scratching or brittleness of exposed specimen constitutes test failure.  
**No scratching or brittleness of exposed specimen.***
- b. *Greater than minimal color change or staining constitutes test failure.  
**No color change or staining.***

Result Conforms

11.3.10 Flash Point Test: All cleaning candidates having a flash point shall be approved by Fire Protection Engineering before they can be evaluated for use.

**PRODUCT: No flash point observed to (IBP) 212<sup>0</sup>F.**

Result Informational

11.3.11 Polycarbonate Crazing Test: Any cracking or crazing of the polycarbonate sheet constitutes failure, when tested in accordance with Section 12.11.  
(Strain = 0.008; 10 minute exposure)

**LEXAN 9600: PRODUCT: No cracking or crazing**

**BMS8-400 BAC 70913: PRODUCT: No cracking or crazing**

Result Conforms