

SMI, Inc.

12219 SW 131 Avenue
Miami, Florida 33186-6401 USA

Phone: (305) 971-7047
Fax: (305) 971-7048

Attn: Lewis Baker
Duo Tech Limited
P.O. Box 268
Bristol, BS15 0BB
United Kingdom

Date: 09-Dec-2010

SMI/REF: 1010-881

Product: **DUOMAX** (received 04-Nov-2010)

Dilution: As received

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Boeing D6-7127 Revision M (April 11, 2003)
CLEANING INTERIORS OF COMMERCIAL
TRANSPORT AIRCRAFT

Category: Detergents - General, Upholstery and Carpet

11.3.1	Sandwich Corrosion	<u>Conforms</u>
11.3.2	Immersion Corrosion Test	<u>Conforms</u>
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Respectfully submitted,



Patricia D. Viani, SMI Inc.

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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
PRODUCT	1	1
Control	1	1

Result Conforms

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

	PRODUCT (Loss per 1"x2" panel)	RESULT
Clad 2024-T3 Aluminum (QQ-A-250/5)	0.4 mg	Conforms
Bare 2024-T3 Aluminum (QQ-A-250/4) alodined per MIL-C-5541	0.4 mg	Conforms
Bare 2024-T3 Aluminum (QQ-A-250/4) anodized per MIL-A-8625 Ty I	0.3 mg	Conforms
Bare 7178-T6 Aluminum (QQ-A-250/14) anodized per MIL-A-8625 Ty I	0.2 mg	Conforms

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	RESULT
Tensile Strength	25 % loss	< 25 %
Elongation	25 % loss	< 25%
Volume	$\pm 15\%$ change	< 10%

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.

PRODUCT: Sealant did not lift at the edges or lose adhesion.

Result Conforms

- 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.

**PRODUCT: Paint film hardness: < 2 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.

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

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:

Upholstery:

- a. Greater than minimal color change or staining constitutes test failure.

Results:

As received: No more than a minimal color change; no staining

- b. Flammability: maximum values:

PROPERTY	MAXIMUM VALUE	RESULTS (As received)
Extinguishing Time	15 seconds	8 seconds
Burn Length	8 inches	5 inches
Drip Extinguish Time	5 seconds	< 3 seconds

Part a: Result Conforms
Part b: Result Conforms

Carpet:

- a. Greater than minimal color change or staining constitutes test failure.

As received: No more than a minimal color change; no staining

- b. Flammability: maximum values:

PROPERTY	MAXIMUM VALUE	RESULTS (As received)
Extinguishing Time	15 seconds	< 5 seconds
Burn Length	8 inches	< 5 inches
Drip Extinguish Time	5 seconds	< 3 seconds

Part a: Result Conforms
Part b: Result Conforms

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11.3.9 Leather and Naugahyde Test

Not applicable

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 (as received): No flash point observed to 212°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.

LEXAN 9600 (2000 psi/10 minutes)

Product (as received): No cracking or crazing

Result Conforms