The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

December 1, 2000
BTS #6890
Contract #6-1171-10A6890

Mr. Robert Vitale
Midwest Industrial Supply, Inc.
1101 3rd Street SE
Canton, Ohio 44707
Phone: (330) 456-3121
Fax: (330) 456-3247

Dear Mr. Vitale:

Midwest's EK35 product has been confirmed by Boeing-performed testing to meet the Boeing Specification D6-17487, Evaluation of Aircraft Maintenance Materials. EK35 will be non-injurious to aircraft surfaces when used as a stabilizing agent and dust suppressant as specified by Midwest Industrial Supply, Inc.

Sincerely,

The Boeing Company
Acting through
BOEING TECHNOLOGY LICENSING & SERVICES

Kenneth J. Cooper
Contracts & Licensing Manager

SR 10135 **Date: 26 September, 2000**

To: Bob Renz 19-JL

cc: Matthias Schriever 73-40
David Pollock 73-40
Eric Barta 73-40

Subject: Evaluation of Midwest Industrial's EK35 Product in Accordance with D6-17487 "Evaluation of Airplane Maintenance Materials" for Possible Use as a Dust Suppressant for Unimproved Runways

ABSTRACT

Midwest Industrial Supply, Inc. of Canton, Ohio supplied BTS with a sample of their EK35 product for evaluation. They requested that four tests be run in accordance with D6-17487 "Evaluation of Airplane Maintenance Materials" for possible use as a dust suppressant for unimproved runways. The tests were Sandwich Corrosion, Acrylic Crazing, Paint Softening and Hydrogen Embrittlement. Note: This testing was carried out to the intent of D6-17487 Sections 2 a and b. This is not material qualification.

All tests passed.

Prepared by
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Approved by 11/7/00
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PURPOSE:

To evaluate Midwest Industrial's EK35 material in accordance with Reference (c) for possible use as a dust suppressant on unimproved airfields. Note: This testing was carried out to the intent of Reference (c), Sections 2a and b. This is not a material qualification.

TEST PROCEDURE:

The tests required by References (a) and (b) are as follows:

1. Sandwich Corrosion
   The Sandwich Corrosion test was performed in accordance with Reference (g) with the modifications specified in Reference (c).

2. Acrylic Crazing
   The test was performed in accordance with Reference (d) using Type C acrylic stressed to an outer fiber stress of 4500 psi.

3. Paint Softening
   Paint Softening was performed in accordance with Reference (e).

4. Hydrogen Embrittlement
   The test was performed in accordance with Reference (f) using 3 type 1a.2 specimens and loaded for 150 hours at 45% of ultimate stress.

TEST RESULTS:

Test results are shown in Table I, below. All tests passed.

The following are the criteria of passage for each specific test:

- Sandwich Corrosion

  When tested in accordance with Reference (g) with the modifications specified in Reference (c), the material, when compared with a distilled water control, shall exhibit no corrosion in excess of that control.

- Acrylic Crazing

  No crazing, cracking or etching after 8 hours of exposure in accordance with Reference (d) using Type C acrylic stressed to an outer fiber stress of 4500 psi.

- Paint Softening

  The material, tested in accordance with Reference (e) shall not produce a decrease in film hardness greater than 2 pencils, or any discoloration or staining. The order of pencil hardness in accordance with Reference (e) is the following: 6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 9H.

- Hydrogen Embrittlement

  When tested in accordance with Reference (f) using type 1a.2 specimens, the material shall not cause a specimen to break within 150 hours of loading in stress.

Table I			**Midwest EK 35**		
Sandwich Corrosion		Clad	Pass	Pass	
		CAA	Pass	Pass	
Acrylic Crazing			Pass	Pass	Pass
Paint Softening	BMS 10-11	Wet	5H	5H	5H
		Dry	5H	5H	5H
	BMS 10-100	Wet	3H	3H	3H
		Dry	3H	3H	3H
Hydrogen Embrittlement			Pass	Pass	Pass

REFERENCES:

(a) WR# 200001238 “Dust Suppressant”
(b) BTS Job #3530 “Midwest Industrial Supply - EK35”
(c) D6-17487 Rev. N “Evaluation of Airplane Maintenance Materials”
(d) ASTM F 484 “Standard Test Method for Stress Crazing of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds”
(e) ASTM F 502 “Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces”
(f) ASTM F 519“Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating Processes and Service Environments”
(g) ASTM F 1110“Standard Test Method for Sandwich Corrosion Test”