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CUSTOMER SERVICE REPORT
BFGOODRICH
SPECIALTY POLYMERS & CHEMICALS DIVISION
AVON LAKE TECHNICAL CENTER

MOTOR VEHICLE SAFETY STANDARD NO. 302:
FLAMMABILITY TESTING

BY

TOM STETZ

PROJECT: 3851-592

MARCH 29, 1988

FOR

THE EXCLUSIVE USE OF
DEERFIELD URETHANE

3851-592

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**MOTOR VEHICLE SAFETY STANDARD NO. 302:
FLAMMABILITY TESTING**

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OBJECTIVE:

Perform flammability testing (Motor Vehicle Safety Standard No. 302) on two submitted samples.

CONCLUSIONS:

- 1) Testing of an unsupported sheet identified as PS-8000 resulted in this material meeting the requirements of MVSS No. 302.
- 2) Results of testing the coating/fabric/coating laminate identified as CC5 JASCO showed that this material does not meet the requirements of MVSS No. 302.

RECOMMENDED ACTION: Forward test results to customer.

**KEYWORDS: Deerfield Urethane; Flammability, MVSS No. 302, (P2-2000),
CC5 JASCO**

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DISCUSSION:

Deerfield Urethane has submitted two samples for flammability testing using Motor Vehicle Safety Standard No. 302. This test procedure is designed for use with materials intended for use in passenger cars, multipurpose passenger vehicles, trucks, and buses. The two submitted materials were identified as:

PS-8000 (Unsupported Sheet)

CC5 JASCO (Coating/Fabric/Coating Laminate)

No specific end-use information was given regarding either of these two materials.

Results of testing the PS-8000 unsupported sheet are shown in Table 1. A rating of SE was obtained when testing five replicates of this material. PS-8000 meets the requirements of MVSS No. 302.

Results of testing the CC5 JASCO coating/fabric/coating laminate are shown in Table 2 (warp direction) and Table 3 (fill direction). Results of testing replicates of this material, in each direction, showed that the CC5 JASCO material does not meet the requirements of MVSS No. 302. In addition, results obtained for the replicates tested were not consistent within each test direction.

The test results necessary to meet the requirements of MVSS No. 302 are listed in Appendix A.

CAVEAT

The flammability testing data, conclusions and recommendations in this report relate solely to measurement and description of the properties of materials, products, or systems in response to heat and flame under controlled laboratory conditions and should not be considered or used for the description, appraisal, or regulation of the fire hazard of materials, products, or systems under actual fire conditions.

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TABLE 1

TEST RESULTS:
MVSS NO. 302 FOR PS-8000*

	<u>Sample 1</u>	<u>Sample 2</u>	<u>Sample 3</u>	<u>Sample 4</u>	<u>Sample 5</u>
Thickness, Mils	21	21	22	20	21
Support	Yes	Yes	Yes	Yes	Yes
Flame Speed, Inches	0	0	0	0	0
Burn Time, Minutes	0	0	0	0	0
Burn Rate, Inches/Minute	0	0	0	0	0
Flammability Classification	SE	SE	SE	SE	SE
Meets Requirements of MVSS No. 302	Yes	Yes	Yes	Yes	Yes

*Test specimens are 4 inches by 14 inches. This material is unsupported sheet (contains no fabric as part of construction).

SE = Self-Extinguishing

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TABLE 2

TEST RESULTS:
MVSS NO. 302 FOR CC5 JASCO* (WARP DIRECTION)

	<u>Sample 1</u>	<u>Sample 2</u>	<u>Sample 3</u>	<u>Sample 4</u>	<u>Sample 5</u>
Thickness, Mils	28	27	28	28	27
Support	Yes	Yes	Yes	Yes	Yes
Flame Speed, Inches	11.0	11.0	11.0	6.5	11.0
Burn Time, Minutes	4.12	3.87	5.52	2.16	4.82
Burn Rate, Inches/Minute	2.67	2.84	1.99	3.01	2.28
Flammability Classification	B	B	B	SE/B	B
Meets Requirements of MVSS No. 302	No	No	No	No	No

*Test specimens are 4 inches by 14 inches.
This material is a coating/fabric/coating laminate.

B = Burns; burn rate in inches/minute.
SE/B = Self-Extinguishing with a burn rate in inches/minute.

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TABLE 3

TEST RESULTS
MVSS NO. 302 FOR CC5 JASCO* (FILL DIRECTION)

	<u>Sample</u> <u>1</u>	<u>Sample</u> <u>2</u>	<u>Sample</u> <u>3</u>	<u>Sample</u> <u>4</u>	<u>Sample</u> <u>5</u>
Thickness, Mils	28	28	28	28	28
Support	Yes	Yes	Yes	Yes	Yes
Flame Speed, Inches	4.4	4.2	11.0	11.0	11.0
Burn Time, Minutes	3.35	3.20	10.92	6.68	0.82
Burn Rate, Inches/Minute	1.31	1.31	1.01	1.65	1.22
Flammability Classification	SE/B	SE/B	B	B	SE/NBR
Meets Requirements of of MVSS No. 302	No	No	No	No	No

*Test specimens are 4 inches by 14 inches.
This material is a coating/fabric/coating laminate.

B = Burns; burn rate in inches/minute.
SE/B = Self-Extinguishing with a burn rate in inches/minute.
SE/NBR = Self-Extinguishing/No-Burn Rate.

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APPENDIX A

FLAMMABILITY TEST
MOTOR VEHICLE SAFETY STANDARD NO. 302
RESULTS NECESSARY TO MEET REQUIREMENTS

Test material "shall not burn, or transmit a flame from across its surface, at a rate of more than 4 inches per minute. However, if a material stops burning before it has burned for 60 seconds from the start of timing, and has not burned more than 2 inches from the point where timing was started, it shall be considered to meet this requirement."

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