



Received:07/18/2017	Completed:07/19/2017	Letter: Q	JB	P.O.#: 12771	Test Report #:	3-20257-0-
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<b>Client's Identification</b>	Lot No: P90234. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (see continuation)
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<b>Tested For: Adam Trenkamp</b>	<b>Key Test: CFR 49 V 571.302 (FMVSS 302)</b>	225
Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Tel: 1-(303)-952-8923</b> <b>Fax: 1-( )- -</b>	<b>Ext:</b>

CLIENT'S IDENTIFICATION (continuation):

Product End Use: Military vehicle flooring.  
 Category: Horizontal SPECIFIER: DOT LE 2011; V 7/17 NTR 6/16 PC: 24H /jd SM/mg

TEST PERFORMED: CFR Title 49 Chapter V Part 571.302 (FMVSS 302) - Flammability of Materials Used in the Interior of Motor Vehicle Occupant Compartments

SPECIMEN:

Size:  Standard Size 102 mm wide by 356 mm long by 13mm max thick  
 Actual product was submitted in short lengths of dimensions:  
 length \_\_\_\_\_ mm by width \_\_\_\_\_ mm and butted end to end to form the  
 required specimen length

Holder:  Standard  
 Modified, 10 mil wire spaced at 25 mm intervals across 51 mm width  
 opening:  
 Test item was less than 56mm wide  
 Specimen softens and bends at flaming end, which results in erratic  
 burning

Combing:  Napped and/or tufted surface was combed twice against the nap

BRIEF DESCRIPTION OF TEST: The test specimen, 102 mm x 356 mm, is held on three sides by a u-shaped test frame. The exposed width of the test specimen is 51 mm. The test frame is placed in a horizontal position inside the test cabinet. Gauge marks of 38 mm and 254 mm from the open end of the "u" are indicated on the test frame. The open edge of the test specimen is subjected to a 38 mm high flame for a period of 15 seconds.

When the burning progresses to the 38 mm gauge mark, a timing device is clicked on. The timing device is clicked off when burning ceases or when burning reaches the 254 mm gauge mark. The distance burned is entered on the report.

A burn rate is calculated based on the recorded time value over the distance burned.

-- See Page 2 for "Results" --



Received:07/18/2017 Completed:07/19/2017 Letter: Q JB P.O.#: 12771 Test Report #: 3-20257-0-

Client's Identification Lot No: P90234. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (see continuation)

Tested For: **Adam Trenkamp** Key Test: CFR 49 V 571.302 (FMVSS 302) 225  
 Skydex Technologies Inc  
 12508 E. Briarwood Ave Suite 1F  
 Centennial, CO 80112  
 Tel: 1-(303)-952-8923 Ext:  
 Fax: 1-( )- -

RESULTS:	(TS)	(T)	(D)		
	Time to Reach	Burning Time Beyond	Burn Distance Beyond	Burn Rate	Code
	38 mm BM (seconds)	38 mm BM (seconds)	38 mm BM (mm)	(mm/minute)	
Specimen #					
1	170	240*	22	6	SE(B)
2	138	240*	31	8	SE(B)
3	141	240*	30	8	SE(B)
4	125	240*	22	6	SE(B)
5	142	240*	20	5	SE(B)

\* Indicates that burning time beyond 38 mm exceeds 240 seconds; the test was terminated by the technician at time noted. The burn rate was calculated at the terminated distance.

NOTES: 1. Burn Rate Formula for Calculation Purposes: 60 x (D/T)  
 2. All results on this report have been rounded to the next highest mm.

METRIC CONVERSION: mm ÷ 25.4 = inches

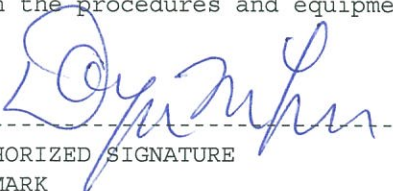
FAILURE CRITERIA: Burn Rate exceeds 102 mm per minute for any specimen.

CONCLUSION: Based on the reported Results and cited Failure Criteria, the item tested:

Passes;  Fails

REMARKS: None

CERTIFICATION: I certify that the reported results were obtained after testing specimens in accordance with the procedures and equipment specified above.

  
 AUTHORIZED SIGNATURE  
 GOVMARK  
 /mo /pm

-- See Page 3 for "Abbreviation/Code Definitions" --

(Page 2 of 3)

*Douglas W. Lipp*

JUL 31 2017

<b>Received:</b> 07/18/2017	<b>Completed:</b> 07/19/2017	<b>Letter:</b> Q	<b>JB</b>	<b>P.O.#:</b> 12771	<b>Test Report #:</b> 3-20257-0-
<b>Client's Identification</b>	Lot No: P90234. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (see continuation)				
<b>Tested For:</b> Adam Trenkamp Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Key Test:</b> CFR 49 V 571.302 (FMVSS 302) 225				<b>Tel:</b> 1-(303)-952-8923 <b>Fax:</b> 1-( )- -

## ABBREVIATION/CODE DEFINITIONS:

- BM - Benchmark
- DNI - Does Not Ignite. Specimen does not support combustion during or after ignition.
- DNO - Did Not Occur.
- SE - Self-Extinguishing. Specimen ignites but does not burn to the timing zone, which starts at 38 mm.
- SE/NBR - Self-Extinguishing/No Burn Rate. Specimen ignites; burning progresses to the 38 mm timing start line and extinguishes within 51 mm beyond the start line. Time of burning after passing 38 mm is less than 60 seconds.
- SE/(B) - Self-Extinguishing/With a Burn Rate. Specimen ignites; burning progresses to the 38 mm timing start line and extinguishes within 51 mm beyond the start line. Time of burning after passing 38 mm is greater than 60 seconds. Calculated burn rate is 51 mm per minute or less.
- B - Specimen ignites. Burning progresses more than 51 mm beyond the 38 mm timing start line. Burn rate is calculated.

NOTE: The original version of FMVSS 302 was expressed in English Units with a maximum burn rate of 4 inches per minute. When the U.S. government converted the document to the metric system, they used 102 mm per minute as the maximum burn rate, rather than the exact conversion (4"/minute x 25.4 = 101.6 mm/minute).

(Page 3 of 3)



Received:07/18/2017	Completed:07/20/2017	Letter: R	MB	P.O.#: 12771	Test Report #:	3-20258-0-
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Client's Identification	Lot No: P90230. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (continuation)
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Tested For: Adam Trenkamp Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	Key Test: CFR 49 V 571.302 (FMVSS 302) 225 Tel: 1-(303)-952-8923 Fax: 1-( )- -	Ext:
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CLIENT'S IDENTIFICATION (continuation):

Product End Use: Military vehicle flooring.  
 Category: Horizontal SPECIFIER: DOT LE 2011; V 7/17 NTR 6/16 PC: 24H /jd SM/mg

TEST PERFORMED: CFR Title 49 Chapter V Part 571.302 (FMVSS 302) - Flammability of Materials Used in the Interior of Motor Vehicle Occupant Compartments

SPECIMEN:

Size:  Standard Size 102 mm wide by 356 mm long by 13mm max thick

Actual product was submitted in short lengths of dimensions:  
 length \_\_\_\_\_ mm by width \_\_\_\_\_ mm and butted end to end to form the required specimen length

Holder:  Standard

Modified, 10 mil wire spaced at 25 mm intervals across 51 mm width opening:

Test item was less than 56mm wide

Specimen softens and bends at flaming end, which results in erratic burning

Combing:  Napped and/or tufted surface was combed twice against the nap

BRIEF DESCRIPTION OF TEST: The test specimen, 102 mm x 356 mm, is held on three sides by a u-shaped test frame. The exposed width of the test specimen is 51 mm. The test frame is placed in a horizontal position inside the test cabinet. Gauge marks of 38 mm and 254 mm from the open end of the "u" are indicated on the test frame. The open edge of the test specimen is subjected to a 38 mm high flame for a period of 15 seconds.

When the burning progresses to the 38 mm gauge mark, a timing device is clicked on. The timing device is clicked off when burning ceases or when burning reaches the 254 mm gauge mark. The distance burned is entered on the report.

A burn rate is calculated based on the recorded time value over the distance burned.

-- See Page 2 for "Results" --

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<b>Client's Identification</b>	Lot No: P90230. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (continuation)
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<b>Tested For: Adam Trenkamp</b> Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Key Test: CFR 49 V 571.302 (FMVSS 302)</b> 225  <b>Tel: 1-(303)-952-8923</b> <b>Ext:</b> <b>Fax: 1-( )- -</b>
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**RESULTS:**

Specimen #	(TS) Time to Reach 38 mm BM (seconds)	(T) Burning Time Beyond 38 mm BM (seconds)	(D) Burn Distance Beyond 38 mm BM (mm)	Burn Rate (mm/minute)	Code
1	175	240*	42	10	SE(B)
2	189	240*	50	12	SE(B)
3	194	240*	54	14	B
4	156	240*	39	10	SE(B)
5	190	240*	40	10	SE(B)

\* Indicates that burning time beyond 38 mm exceeds 240 seconds; the test was terminated by the technician at time noted. The burn rate was calculated at the terminated distance.

- NOTES: 1. Burn Rate Formula for Calculation Purposes: 60 x (D/T)  
 2. All results on this report have been rounded to the next highest mm.

METRIC CONVERSION: mm ÷ 25.4 = inches

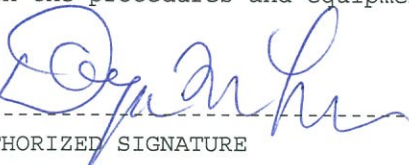
FAILURE CRITERIA: Burn Rate exceeds 102 mm per minute for any specimen.

CONCLUSION: Based on the reported Results and cited Failure Criteria, the item tested:

Passes;  Fails

REMARKS: None

CERTIFICATION: I certify that the reported results were obtained after testing specimens in accordance with the procedures and equipment specified above.

  
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-- See Page 3 for "Abbreviation/Code Definitions" --

*Douglas W. Lipp*

(Page 2 of 3)

JUL 3 1 2017

<b>Received:</b> 07/18/2017	<b>Completed:</b> 07/20/2017	<b>Letter:</b> R	<b>MB</b>	<b>P.O.#:</b> 12771	<b>Test Report #:</b> 3-20258-0-
<b>Client's Identification</b>	Lot No: P90230. Date of Mfg: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.25". (continuation)				
<b>Tested For:</b> Adam Trenkamp Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Key Test:</b> CFR 49 V 571.302 (FMVSS 302) 225				<b>Tel:</b> 1-(303)-952-8923 <b>Ext:</b> <b>Fax:</b> 1-( )- -

## ABBREVIATION/CODE DEFINITIONS:

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(Page 3 of 3)



Received:07/18/2017	Completed:07/27/2017	Letter: S	AM	P.O.#: 12771	Test Report #:	3-20259-0-
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<b>Client's Identification</b>	Lot No.: P90235. Date of Mfg.: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.8". (see continuation)
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<b>Tested For: Adam Trenkamp</b> Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Key Test: BSS 7239 Gas Toxicity</b>  <b>Tel: 1-(303)-952-8923</b> <b>Fax: 1-( )- -</b>	<b>1490</b>  <b>Ext:</b>
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CLIENT'S IDENTIFICATION (continuation):

Product End Use: Military vehicle flooring. [Black side exposed to test heat source].

Category: Gas Toxicity    Specifier: Boeing    NTR 04/16    PC: 24H    /dl  
 LE 1988; V 32/17

APPROXIMATE THICKNESS OF MATERIAL (as measured by Govmark): 0.842 inches

APPROXIMATE WEIGHT OF SPECIMEN (as weighed by Govmark): 25.23 grams

TEST PERFORMED: Boeing Test Method BSS 7239 Rev-A - Analysis of the products of combustion using the NBS smoke chamber and gas detector tubes to determine presence of specific products of combustion

Reference: ASTM E662

BRIEF DESCRIPTION OF TEST: The basic procedure is described by BSS 7238 - Boeing Specification Support Standard, Test Method for Smoke Generation by Materials on Combustion

Two separate tests are conducted on multiple specimens. In one test the face of each specimen is exposed to a radiant heat source of 2.5 W/cm<sup>2</sup> (non flaming mode). In a second test completely new specimens are subjected to both the radiant heat source and 6 small igniting flames (flaming mode).

Analytical techniques are gas specific and as follows:

I. Hydrogen Cyanide and Hydrogen Chloride:

Four minutes after the start of the test the combustion product is collected in a gas detector tube, used in combination with a Draeger "Accuro" Gas Extraction Pump, Model 6400000. As the combustion product is drawn through the detector tube, a reagent inside the tube stains and indicates the concentration of a specific gas produced during combustion.

II. Carbon Monoxide, Sulphur Dioxide and Nitrous Oxide(s):

At the four minute mark, the amounts (ppm) of these non-reactive gases are determined using a Testo 350 Flue Gas Analyzer taking values at least once per second. When values have stabilized, the data is recorded.

III. Hydrogen Fluoride:

Hydrogen Fluoride is assessed using Potentiometry. At the four minute mark, 1000 ml of the chamber gases are drawn at a maximum rate of 200 ml per minute into an impinger bottle containing the absorption solution. The contents of the impinger bottle are then transferred to a measuring flask and renormalized to 100ml with distilled water and an Ionic Strength Adjuster (ISA). Concentrations are read by instrumentation. Values are recorded.

-- See Page 2 for "Conclusion". --  
 (Page 1 of 3)



Received:07/18/2017 Completed:07/27/2017 Letter: S AM P.O.#: 12771 Test Report #: 3-20259-0-

Client's Identification Lot No.: P90235. Date of Mfg.: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.8". (see continuation)

Tested For: Adam Trenkamp Key Test: BSS 7239 Gas Toxicity 1490  
 Skydex Technologies Inc  
 12508 E. Briarwood Ave Suite 1F Tel: 1-(303)-952-8923 Ext:  
 Centennial, CO 80112 Fax: 1-( )- -

RESULTS and ACCEPTANCE CRITERIA:

		Flaming Mode at 4 Minutes			Suggested Maximum Limits at 4 Minutes
Combustion By Product		Specimen 1 (ppm)	Specimen 2 (ppm)	Average (ppm)	(ppm)
CO	Carbon Monoxide	204.0	156.0	180.0	3500
HF	Hydrogen Fluoride	1.5	1.4	1.5	200
HCl	Hydrogen Chloride	LT 1.0	LT 1.0	LT 1.0	500
HCN	Hydrogen Cyanide	LT 0.5	LT 0.5	LT 0.5	150
SO/2	Sulphur Dioxide	0.0	0.0	0.0	100
NO, NO/2	Nitrous Gases	43.5	46.3	44.9	100

CONCLUSION #1 (FLAMING MODE): The above results for specimens tested in the Flaming Mode:

- Do not exceed the Suggested Maximum Limits
- Exceed the Suggested Maximum Limits

		Non Flaming Mode at 4 Minutes			Suggested Maximum Limits at 4 Minutes
Combustion By Product		Specimen 1 (ppm)	Specimen 2 (ppm)	Average (ppm)	(ppm)
CO	Carbon Monoxide	267.0	251.0	259.0	3500
HF	Hydrogen Fluoride	2.4	1.8	2.1	200
HCl	Hydrogen Chloride	LT 1.0	LT 1.0	LT 1.0	500
HCN	Hydrogen Cyanide	LT 0.5	LT 0.5	LT 0.5	150
SO/2	Sulphur Dioxide	0.0	0.0	0.0	100
NO, NO/2	Nitrous Gases	5.9	5.7	5.8	100

CONCLUSION #2 (NON-FLAMING MODE): The above results for specimens tested in the Non-Flaming Mode:

- Do not exceed the Suggested Maximum Limits
- Exceed the Suggested Maximum Limits

ABBREVIATIONS WHICH MAY BE USED: M = Minimum detectable concentration  
 LT = Less Than



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<b>Client's Identification</b>	Lot No.: P90235. Date of Mfg.: 7/12/2017. Style: Rigid material - part assembly. Composition: TPU + adhesive + TPO material traction surface. Thickness: ~0.8". (see continuation)				
<b>Tested For:</b> Adam Trenkamp Skydex Technologies Inc 12508 E. Briarwood Ave Suite 1F Centennial, CO 80112	<b>Key Test:</b> BSS 7239 Gas Toxicity			1490	
	<b>Tel:</b> 1-(303)-952-8923			<b>Ext:</b>	
	<b>Fax:</b> 1-( )- -				

REMARKS: None.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

  
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Test Technician: Ajaz Mehdi



(Page 3 of 3)

*Douglas W. Lipp*

JUL 3 1 2017