#### **TEST REPORT**



CLIENT:

ASLAN Schwarz GmbH & Co., KG

Oberauel 2 Overath

Germany 51491

Attn: Tobias Krämer

**Test Report No:** 

2203730-R1

Date:

November 3, 2010

**REVISION:** 

This report supersedes SGS Report Number 2203730 issued on November 2, 2010.

Added complete company name on all the following pages.

SUBJECT:

Evaluation of submitted material in accordance with ASTM D2047-04.

SAMPLE ID:

Three (3) samples identified by the client as "ASLAN MP326" Thickness ~125 µm

were received on October 12, 2010 in good condition.

PROCEDURE:

The samples were tested for coefficient of static friction in accordance with ASTM D 2047-04. No revisions to this report will be allowed after 90 days of the report date.

The test data and results are on the following page(s).

RESULTS:

DATE TESTED:

10/26/10 - 10/27/10

REMARKS:

The Occupational Safety and Health Administration recommend that walking surfaces have a static coefficient of friction of 0.5. According to 28 CFR Ch. 1-1994 Section A4.5.1, a static coefficient of friction of 0.6 is recommended for accessible routes and 0.8 for

ramps.

**CERTIFICATION:** 

The tests reported here were conducted under the continuous direct supervision of SGS

U.S. Testing Company Inc., Tulsa, OK.

SIGNED FOR AND ON BEHALF OF SGS U.S. TESTING COMPANY INC.

Ray Abdo

Materials Department Technician

J. Brian McDonald

Branch Manager

Page 1 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



Client: ASLAN Schwarz GmbH & Co., KG

Report No.: 2203730-R1

#### **Test Procedure and Results**

#### **ASTM D 2047-04**

The test shoe material used during test was rubber purchased and specified to conform to ASTM D1630, as allowed as an alternative shoe material per ASTM D2047-04 Section 7.4. Additionally the test specimen was wetted using distilled water to simulate wet floor conditions. The test shoe was assembled and maintained as per Section 7 and all testing conducted in accordance with Section 8. All materials and equipment used during test conformed to the relevant applicable sections of the test method, unless otherwise specified by the client.

**Environment:** The testing was conducted in a controlled environment of 70°F and 50% relative

humidity.

<u>Coating Identification:</u> PVC Self-Adhesive Matte Film

Thickness: ~125 μm

Results (Dry Leather):

SAMPLE ID: ASLAN MP 326		
Specimen	Determination	Static Coefficient of Friction
1	1	0.45
	2	0.43
	3	0.41
	4	0.43
2	1	0.42
	2	0.42
	3	0.39
	4	0.40
3	1	0.38
	2	0.38
	3	0.38
	4	0.39
	Average:	0.46
	Standard Deviation:	0.1661

## Page 2 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



## Results (Wet Leather):

SAMPLE ID: ASLAN MP 326  Static Coefficient		
Specimen	Determination	Friction
1	1	0.79
	2	0.82
	3	0.72
	4	0.73
2	1	0.64
	2	0.74
	3	0.73
	4	0.79
3	1	0.73
	2	0.82
	3	0.9
	4	0.8
	Average:	0.79
	Standard Deviation:	0.0906

# Page 3 of 7



#### Results (Dry Neolite):

Specimen	Determination	Static Coefficient of Friction
1	1	0.72
	2	0.75
	3	0.71
	4	0.73
2	1	0.69
	2	0.7
	3	0.71
	4	0.71
3	1	0.69
	2	0.69
	3	0.68
	4	0.68
	Average:	0.73
	Standard Deviation:	0.0843

#### Page 4 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



## Results (Wet Neolite):

Specimen	Determination	Static Coefficient of Friction
1	1	0.75
	2	0.81
	3	0.82
	4	0.82
2	1	0.69
	2	0.7
	3	0.71
	4	0.71
3	1	0.82
	2	0.82
	3	0.84
	4	0.77
	Average:	0.79
	Standard Deviation:	0.0834

# Page 5 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



## Results (Dry Rubber):

SAMPLE ID: ASLAN MP 326		
Specimen	Determination	Static Coefficient of Friction
1	1	0.88
	2	1.14
	3	1.10
	4	0.9
2	1	1.05
	2	1.05
	3	1.05
	4	1.05
3	1	1.10
	2	1.03
	3	1.00
	4	1.00
	Average:	1.04
	Standard Deviation:	0.0739

## Page 6 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



Client: ASLAN Schwarz GmbH & Co., KG

Report No.: 2203730-R1

#### Results (Wet Rubber):

SAMPLE ID: ASLAN MP 326		
Specimen	Determination	Static Coefficient of Friction
1	1	1.00
	2	1.20
	3	1.13
	4	1.15
2	1	1.20
	2	1.20
	3	1.15
	4	1.15
3	1	1.20
	2	1.20
	3	1.13
	4	1.13
	Average:	1.14
	Standard Deviation:	0.0694



#### \*\*\*\*\*

# **End of Report**

## Page 7 of 7

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.