



TEST REPORT

**RUBBERECYCLE, LLC
1985 RUTGERS UNIVERSITY BLVD.
LAKEWOOD, NJ 08701**

**DTL REPORT NO 6128012-3
REPORT DATE 4/11/2007
RECEIVE DATE 3/13/2007**

ATTN: Mr. Keith Sacks

SAMPLE DESCRIPTION

Rubberecycle, LLC submitted approximately twelve, (12), cubic feet of loose fill rubber material, identified by Rubberecycle, LLC as Playsafer. Testing was performed on 3/26/07 and 3/29/07.

WORK REQUESTED/TEST SPECIFICATIONS

To determine the maximum critical fall height of a five, (5), inch compacted depth Playsafer loose fill rubber material at temperatures -6° C, 23° C and 49° C per ASTM F1292-04.

REFERENCE DOCUMENTS

ASTM F1292-04 – Impact Attenuation of Surface Systems Under and Around Playground Equipment

CONCLUSION

The maximum critical fall height of a five, (5), inch compacted depth Playsafer loose fill rubber material was determined at thirteen, (13), feet.

The material depth indicated (5 inch compacted Playsafer), met HIC, (Head Impact Criteria), and G-Max requirements at the critical fall height indicated per ASTM F1292-04. The results reported herein reflect the performance of this playground surface system at the time of testing and at the temperatures indicated. Performance will vary with temperature, moisture content and other factors.

TEST RESULTS

Sample material, (Playsafer), was tested to determine the maximum critical fall height of a five, (5), inch compacted depth at temperatures -6° C, 23° C and 49° C. An impact test consists of three (3) impacts at the same impact site, at each height. Calculate the average HIC and G-Max values using the second and third impacts.

For impact data reduction, please refer to Attachment C, (2 pages).

REQUIREMENTS

ASTM F1292-04, using an average of the last two (2) of three (3) impacts. No value shall exceed 200 G-Max or 1000 HIC.

TEST EQUIPMENT

Detroit Testing Laboratory, Inc.'s calibration system meets the requirements of ISO 17025:1999.

- Triax 2000 Surface Impact Tester, Serial No.: 30-7901, Verified prior to use
- Dytran Tri-axial accelerometer, Model 3014M2, Serial No.: 1361, DTL ID No.: 11509, Calibrated to 8/31/2007
- Omega Digital Thermometer, Model HHII, ID No. 10633, Calibrated to 2/2008.
- Omega Penetration Probe, Thermocouple Type K, Model No. 88311, ID No. 10634, Calibrated to 2/2008.
- Thermotron Environmental Chamber, ID No. EC106, Calibrated to 5/31/2007.
- Thermotron Environmental Chamber, ID No. EC002, Calibrated to 8/1/2007

SAMPLE DISPOSITION

Sample material will be retained by DTL for fifteen (15) days, then disposed of at the discretion of DTL unless otherwise requested by Rubbecycle, LLC .

Reported by:

DETROIT TESTING LABORATORY, INC.

Handwritten signature of David Splane in black ink, including a circled 'DS' monogram.

David Splane
Certification Program Coordinator

Handwritten signature of Keith Shelton in purple ink.

Keith Shelton
Certification Program Manager

DS/KGS/jg

Enclosure: Terms and Conditions



DETROIT TESTING LABORATORY, INC.

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IPEMA SURFACING MATERIAL REPORT – ASTM F1292-04

Client: Rubberecycle, LLC
 Manufacturer: Rubberecycle, LLC
 Manufacturing Location: Lakewood, NJ
 Commercial Name of product: Playsafer, (Loose Fill Rubber)

Date of Manufacture: Unknown
 No. of samples submitted: 12 Cu. Ft.

DTL Report No.: 6128012-3
 Report Date: 4/6/2007
 Test Date: 3/26/07 & 3/29/07
 Initial Test
 Follow up Test Ref Job:
 Sample Selection
 Selection Date: N/A
 Sample Receipt Date: 3/13/2007
 Ambient Air Temperature: 23 °C

Test Equipment:

DTL Guided Wire Tower Accelerometer Calibration Due Date: N/A
 Triax 2000 Accelerometer Calibration Due Date: 8/31/2007
 Temperature Probe Calibration Due: Feb., 2008

Environmental Chamber No.: EC106
 Calibration Due Date: 5/31/2007
 Environmental Chamber No.: EC002
 Calibration Due Date: 8/1/2007

Loose fill Material Sample Description:

Loose Fill Wood:
 Engineered Wood Fiber:
 Loose fFill Rubber
 Sand:
 Gravel:
 Other:

Un-compacted Depth: 6 Inches
 Compacted Depth: 5 Inches

Unitary Sample Description:

Tiles
 Poured in Place
 Other

Thickness:
 Thickness:
 Thickness:

Comments:

The Maximum Critical Fall Height of a five, (5), inch compacted depth Playsafer, loose fill rubber, was determined to exceed Detroit Testing Laboratory's maximum test parameters of: 13 Ft.

The results reported herein reflect the performance of the above described samples at the time of testing and at the temperature(s) reported. The results are specific to the described samples. Samples of surfacing materials that do not closely match the described samples will perform differently. The following data sheet provides an accurate representation of the test results.

Sample in compliance with ASTM F1292-04 at the temperature and rating specified? Yes No

Signature: D. Splane (js)

Date: 4/13/07

Reviewed by: Scott B. Smith

Date: 4/13/07

Client: **Rubberecycle, LLC**DTL Report No. **6128012-3**Manufacturer: **Rubberecycle, LLC**Test Date: **3/26/07 & 3/29/07**

Drop	Impact Height - (Ft.)	Reference Temperature -6°C			Reference Temperature 23°C			Reference Temperature 49°C		
		g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)
1	12	106	605	27.9	96	526	28.1	97	529	27.9
2	12	108	592	27.9	102	566	28.0	99	527	27.8
3	12	104	579	28.0	104	557	28.0	102	542	27.8
Average		106	585.5		103	561.5		100.5	534.5	
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C		23°C	Max. Change from reference ± 3°C		49°C	Max. Change from reference -3°C	
Sample Condition:		DRY			DRY			DRY		

Drop	One foot over (Ft.)	Reference Temperature -6°C			Reference Temperature 23°C			Reference Temperature 49°C		
		g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)
1	13	116	693	29.2	108	611	29.2	105	623	29.2
2	13	131	848	29.2	106	557	29.0	128	791	29.1
3	13	129	853	29.2	118	655	29.0	130	798	29.1
Average		130	850.5		112	606		129	794.5	
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C		23°C	Max. Change from reference ± 3°C		49°C	Max. Change from reference -3°C	
Sample Condition:		DRY			DRY			DRY		

Drop	One foot under (Ft.)	Reference Temperature -6°C			Reference Temperature 23°C			Reference Temperature 49°C		
		g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)	g-Max	HIC	Velocity (ft/s)
1	11	91	448	26.7	94	482	26.8	81	384	26.7
2	11	100	523	26.7	101	519	26.7	84	415	26.7
3	11	95	470	26.7	99	509	26.7	90	445	26.8
Average		97.5	496.5		100	514		87	430	
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C		23°C	Max. Change from reference ± 3°C		49°C	Max. Change from reference -3°C	
Sample Condition:		DRY			DRY			DRY		



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