Grant County Mulch, Inc.
181 Mulch Drive
Petersburg, WV 26847
800.749.7451
www.grantcountymulch.com

Kiddie Mat

Grant County Mulch, Inc. recommends using the services of a qualified engineer or landscape architect when installing your surfacing material.

A depth 14"-15" of material will be needed to reach a compacted depth of 12 inches. The 12" depth will need to be monitored regularly to insure the required 12" depth.

Please refer to ASTM for fall zones, etc. on all equipment.

Site Preparation:

1. Grade Soil to a 2% grade towards an area you would like the water to drain.
2. Dig a trench and place drain-pipe in.
3. Cover pipe and install a layer of geo-fabric over topsoil overlapping the seams.
4. Cover the fabric with a 3" layer of stone that will allow drainage.
5. Any timbers or containment systems would have previously been installed.
6. Place an additional layer of geo-fabric over stone, again overlapping.
7. Bring in and spread approximately 6-8" of playground material.
8. Wet material down and mechanically compact.
9. Repeat step 7 with balance of material need to compact to 12".

Installation Notes:

1. Excavate an area to allow for a depth of 12" compacted of safety surface material. To ensure proper drainage, a minimum grade of 1%-1 ½% of drop needs to be established.
2. The above area should then be compacted and proper grade established.
3. Drainage stone approximately 2-3 inches should be installed with the drainage fabric.
4. If required, any containment systems should now be put into place and secured.
5. Twelve inches of wood fiber may now be brough in and installed.
6. If you have any questions or concerns, call 304.703.5600.

Maintenance Tips:

1. Inspect and remove any foreign matter that has accumulated on the fiber.
2. Rake level any spots where surfacing has been disturbed.
3. Dig down into the surfacing and measure the depth to ensure the necessary material is still maintained.
4. Top dress where needed.

Maintenance Recommendations

- Daily – visually inspect playground and remove any foreign objects, trash, glass, contaminants, etc..
- Weekly – rake any displaced material around swings and equipment to maintain the sufficient depth of material in fall areas. Keep all wheelchair entrances and exits packed and free of any obstacles.
- Monthly – Check for sufficient drainage on site. Replace material to ensure proper depth requirements.

Notes:

- The above information is based on normal or average playgrounds. In higher use sites these steps may need performed on a more frequent schedule.
- In dry climates the surfacing may need to be watered to maintain its resistance to fire and dust and to keep the material pliable.

TÜV America Inc.
1866 New Energy Way
Auburn Hills, MI 48326

Phone: (616) 546-4600

America

Hazardous Metals Test
ASTM F2075, Section 4.5.2 per 8.0

Manufacturer: Grant County Mulch, Inc.

Main Office Address: 261 Barryville Pike, Charles Town, WV 25446

Manufacturing Location ID: Charles Town, WV

Commercial Name of Product: Kiddie Mat

PURCHASE ORDER: # 2900035336

PROJECT NO.: 721005022-4

The following ISO 17025-accredited Laboratory performed testing:

Enviro Lab Services, Inc.
4150 Arrow St.
Oscoda, MI 48750
Enviro Lab Services, Inc., report attached (1 page).

Test Result: **Pass** ☑ **Fail** ☐

Prepared By:

12/6/2024
Date

Project Engineering Technician
Title

Reviewed and Approved By:

12/9/2024
Date

Regional Manager
Title

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

Enviro Lab Services

CERTIFICATE OF ANALYSIS

USEPA Lab ID: MI9885 | Michigan EGLE Lab ID: 9115 | **Report Date:** 12/5/2024

Laboratory Report

Order ID:	**24112601**	**Client:**	**TUV SUD**
Sample ID:	**24112601-4**	**Client PO#:**	2900035336
Sample Matrix:	Engineered Wood Fiber	**Project Name:**	Hazardous Metals Analysis by ASTM F2075
Customer Sample ID:	721005022-4	**Contact:**	David Splane
Sample Date:		**Reporting To:**	david.splane@tuvsud.com
Sample Time			raymond.majszak@tuvsud.com
Sample Collected By:			tim.fouchia@tuvsud.com
Analysis Date:	12/5/2024	**Analyst:**	Travis Kirin

TEST: Hazardous Metals Analysis by ASTM F2075

Analyte	CAS #	Method	Result (ppm)	Maximum Allowable Limit (ppm)	Reporting Limit (ppm)
Soluble Antimony	7440-36-0	ASTM F2075	<5	60	5
Soluble Arsenic	7440-38-2	ASTM F2075	<5	25	5
Soluble Barium	7440-39-3	ASTM F2075	57	1000	5
Soluble Cadmium	7440-43-9	ASTM F2075	<5	75	5
Soluble Chromium	7440-47-3	ASTM F2075	<5	60	5
Soluble Lead	7439-92-1	ASTM F2075	<5	90	5
Soluble Mercury	7439-97-6	ASTM F2075	<5	60	5
Soluble Selenium	7782-49-2	ASTM F2075	<5	500	5

The hazardous metal content of the tested product is compliant with ASTM F-2075.

FINAL APPROVAL

APPROVED BY: *Travis Kirin* Lab Manager

The results herein relate only to the items/batch tested, calibrated, or sampled in this report. "ND" indicates that the analyte was not detected nor present in the sample tested at levels at or below the limit of quantitation. Results only pertain to sample as received or those sampled by Enviro Lab Services Inc.

This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure. Under applicable law. If you have received this document in error, please immediately notify us and return it to the address listed below.

This report may not be reproduced except in full without approval from Enviro Lab Sevices Inc.

Enviro Lab Services, Inc - ISO 17025 ACCREDITED LABORATORY

Accreditation Number: 108439

Certificate Number: L23-315

Enviro Lab Services, Inc.
4150 Arrow Street, Oscoda, MI 48750
Phone: (248)882-1245
www.envirolabusa.com

TÜV SÜD America Inc.
Product Safety Services
1866 New Energy Way
Auburn Hills, MI 48326
Phone: (616) 546-4600

IPEMA IMPACT ATTENUATION REPORT – ASTM F1292-22

Participant: Grant County Mulch, Inc.
Main Office Address: 261 Barryville Pike, (US-341)
Charles Town, WV 25446
Phone: 304-703-0158
Manufacturing Location ID: Charles Town, WV
Commercial Name of product: Kiddie Mat
Date of Manufacture: Unknown
No. of samples submitted: Approx 12 cu. ft.

TUV Report No.: 721005022-3
Report Date: 12/8/2024
Test Date: 12/5/2024 & 12/6/2024
Selection: ☑ Initial: ☑
Follow up ☐ Ref Job:
Sample Receipt Date: 11/19/2024
Ambient Air Temperature: 23.4 °C
Humidity: 25 %

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☑
Alpha Automation, Triax, TUV System 7: ☐
Accelerometer ID: PLYP00193
Accelerometer Calibration Date: 1/10/2024

Environmental Chamber No.: PLYP00069
Calibration Due Date: 8/14/2025
Environmental Chamber No.: AE-029
Calibration Due Date: 8/14/2025

Loose Fill Material Sample Description:

Engineered Wood Fiber: ☑
Loose Fill Wood: ☐
Rubber Nuggets: ☐
Rubber Buffings: ☐
Sand: ☐
Gravel: ☐
Other: ☐

Un-compacted Depth: 15 Inches

Compacted Depth: 12 Inches

Unitary Sample Description:

Tiles: ☐
Poured in Place: ☐
Other: ☐

Total Thickness:
Top Layer:
Base Layer:

Turf System Sample Description:

Turf: ☐
Pad: ☐
Aggregate: ☐
Infill: ☐

Turf Pile Height: Inches
Pad Thickness: Inches
Aggregate: Inches
Infill Amount: Lbs./Sq. Ft.
Infill Type:

Comments:

The maximum critical fall height of the above described sample was determined to be: 16 **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 F1292-22 at the temperature and rating specified? **Yes** ☑ **No** ☐

Signature: *Patrick Ashley* Title: Project Engineering Technician Date: 12/8/2024

Reviewed by: Title: Regional Manager Date: 12/9/2024

Participant: Grant County Mulch, Inc.

TUV Report No: 721005022-3

Manufacturing Location ID: Charles Town, WV

Test Date: 12/5/2024 & 12/6/2024

Drop	Critical Fall Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	16	95	523	32.2	16.12	96	568	32.0	15.92	83	438	32.2	16.12
2	16	128	840	32.3	16.22	129	885	32.0	15.92	127	868	32.3	16.22
3	16	143	1035		0.00	142	1011	32.1	16.02	125	881	32.3	16.22
Average		135.5	937.5			135.5	948.0			126.0	874.5		
Measured Surface Temperature		-4°C	Max. Change from reference + 3°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			47°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			

Drop	One foot over (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	17	82	480	33.1	17.03	106	662	33.1	17.03	63	364	33.1	17.03
2	17	107	653	33.1	17.03	143	1085	33.1	17.03	86	506	33.3	17.24
3	17	114	753	33.2	17.14	166	1399	33.2	17.14	106	709	33.3	17.24
Average		110.5	703.0			154.5	1242.0			96.0	607.5		
Measured Surface Temperature		-3°C	Max. Change from reference + 3°C, (5°F)			22°C	Max. Change from reference ± 3°C, (5°F)			48°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			

Drop	One foot under (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	15	114	737	31.1	15.04	102	602	31.0	14.94	77	406	31.1	15.04
2	15	130	927	31.0	14.94	135	927	31.2	15.13	110	705	31.1	15.04
3	15	124	828	31.0	14.94	121	778	31.0	14.94	120	832	31.2	15.13
Average		127.0	877.5			128.0	852.5			115.0	768.5		
Measured Surface Temperature		-4°C	Max. Change from reference + 3°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			48°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			

Sieve Analysis Data Collection Form
ASTM F2075-20 per Section 4.4 and Section 7

TÜV SÜD America, Inc.
1866 New Energy Way
Auburn Hills, MI 48326
Ph: (616) 546-4600

Customer/Participant: Grant County Mulch, Inc.
Main Office Address: 261 Barryville Pike, (US-341)
City, State, Zip: Charles Town, WV 25446
Location ID: Charles Town, WV
Commercial Name of Product: Kiddie Mat

Test Date: 11/20/2024
Project No.: 721005022-2
Ambient Air Temp.: 22.4°C
Relative Humidity: 38 %
Follow-up: ☐ Ref. Job: n/a

Test Equipment Used

TUV Asset No.:	Equipment Type	Manufacturer	Model	
PLYP00234	Environmental Chamber	Russells	GD-16-105-AC	
PLYP00163	Data Logger	Omega	OM-CP-RHTEMP101A	
PLYP00232	Hygro-thermometer	Extech Instruments	445815	☑
PLYP00211	Hygro-thermometer	Extech Instruments	445702	☐
PLYP00055	Test Sieve	W.S. Tyler	No. 16 (1.19 mm)	
PLYP00056	Test Sieve	W.S. Tyler	3/8" (9.53 mm)	
PLYP00057	Test Sieve	W.S. Tyler	3/4" (19.05 mm)	
PLYP00059	Sieve Shaker	W.S. Tyler	RX 812	
PLYP00083	Balance	Denver Instruments	18453642	

Data

Initial Sample and Container Weight	959.1
Tare weight of Container	183.6
Initial Sample Dry Weight (g)	775.5
Sample and Container Weight for 3/4in. Sieve	187.9
Tare weight of Container	187.9
Sample Remaining on 3/4in. Sieve (g)	0.0
Sample and Container Weight for 3/8in. Sieve	262.7
Tare weight of Container	178.6
Sample Remaining on 3/8in. Sieve (g)	84.1
Sample and Container Weight for #16 Sieve	784.2
Tare weight of Container	178.1
Material Remaining on #16 Sieve (g)	606.1

Sieve Size	Min / Max Requirements	% Passing
3/4" (19.05 mm)	99 - 100%	100.0
3/8" (9.53 mm)	78 - 100%	89.2
No. 16 (0.0469 in.)	0 -15%	11.0

Sample in compliance with ASTM F2075-20 for Sieve Analysis Section 4.4 per 7.4: Yes ☑ No ☐
Tare weights of containers verified prior to testing.
Note: Testing performed at TÜV SÜD America in Auburn Hills, MI.
Comments:

Performed By: Tim Lockstein Title: Project Engineering Technician Date: 11/20/2024

Reviewed By: Title: Regional Manager Date: 11/21/2024

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.

TÜV SÜD America, Inc., Product Safety Services
1866 New Energy Way, Auburn Hills, MI 48326
Phone: (616) 546-4600

Tramp Metals Test Results

ASTM F2075
Standard Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment, Section 4.6 and Section 9

Customer/Participant: Grant County Mulch, Inc. Report Date: 11/19/2024
Main Office Address: 262 Berryville Pike, (US-340), Charles Town, WV 25446 Test Date: 11/14/2024
All testing performed at location ID: Charles Town, WV Project No.: 721005022-1
Commercial Name of Product: Kiddie Mat Follow-up: ☐ Ref. Job:

4.6.1 Per 9.4 Tramp Metals

Level – 0in. – 15in.

Quadrant 1		Quadrant 2		Quadrant 3		Quadrant 4	
Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
☒	☐	☒	☐	☒	☐	☒	☐

Level – 15in. – 30in.

Quadrant 1		Quadrant 2		Quadrant 3		Quadrant 4	
Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
☒	☐	☒	☐	☒	☐	☒	☐

Level – 30in. – 45in.

Quadrant 1		Quadrant 2		Quadrant 3		Quadrant 4	
Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
☒	☐	☒	☐	☒	☐	☒	☐

Level – 45in. – 60in.

Quadrant 1		Quadrant 2		Quadrant 3		Quadrant 4	
Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
☒	☐	☒	☐	☒	☐	☒	☐

Pass ☒ Fail ☐

Comments:

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

Performed By: [signature] Reviewed By: Timothy Franklin
Title: Regional Manager Title: Project Engineering Technician
Date: 11/19/2024 Date: 11/21/2024