



**TESTING SERVICES, INC.**  
 817 SHOWALTER AVE. • P.O. BOX 2041  
 DALTON, GEORGIA 30722-2041  
 PHONE: (706) 226-1400 • FAX: (706) 226-6118



## TEST REPORT

CLIENT:	Controlled Products	REPORT NUMBER:	60721E
	200 Howell Drive	LAB TEST NUMBER:	2607-9496
	Dalton, GA 30721	DATE:	May 13, 2014
		PAGE:	1 of 2

**SAMPLE ID:**

Style	Roll #	Backing	Sidemark	RE:	Underlayment	Infill
PL929	18C78103A	Urethane	PL929-Playground/ Landscape Testing	30193	2" Polygreen Playground Pad	1.5 lbs/ft <sup>2</sup> Sand

**Tested Dimension:** 18" x 18"

**Sub Base:** 3" Aggregate (Comprised of 2" #7 & #81 Rock-Bottom + 1" Compacted Fines Layer-Top)

**Impact Location:** Center of Test Material

**Date of Receipt:** April 25, 2014

**Testing Period:** May 9-13, 2014

**Test Procedure:** The submitted sample was evaluated for Shock Absorbing Properties in Accordance with the procedures outlined in ASTM F 1292-09; Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment. A deviation to this standard was made at the request of the client who instructed Tsi to substitute the above listed sub-base in place of concrete to comply with the client's installation protocol.

**Missile:** Hemispherical (Triaxial Accelerometer): Total Drop Assembly Weight (46g) 10 lbs

**Test Equipment:** Triax 2000 Surface Impactor  
 Date of Last Calibration: 4/16/2014 By Alpha Automation

**Sample Pre-Condition:** 50±10 RH, 70F±5F for a minimum of 24 hrs prior to testing

**Sample Conditioning:** 8 hrs @ each reference temperatures prior to testing

**Temperature:** Maximum Drop Height That Gives a Gmax of 200 or Less and A HIC of 1000 or less

Ambient, 72°F (23°C) 9'

Hot, 120°F (49°C) 9'

Cold, 25°F (-6°C) 9'

<b>Critical Fall Height (CFH):</b>	<b>9'</b>
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Prepared and signed by:

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Erle Miles, Jr. VP  
 Testing Services Inc.



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AMBIENT Sample Condition: Dry Temperature: 70°F (23°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	22.6	2	8'	7.94	119	729	
	2	22.6	0	8'	7.94	123	762	
	3	22.6	3	8'	7.94	118	703	
	Average				Drops 2, 3		121	733
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	23.9	1	9'	8.88	128	832	
	2	23.9	7	9'	8.88	128	809	
	3	23.9	2	9'	8.88	124	774	
	Average				Drops 2, 3		126	792
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	25.2	1	10'	9.87	141	991	
2	25.2	5	10'	9.87	150	1084		
3	25.2	3	10'	9.87	148	1053		
Average				Drops 2, 3		149	1069	

HOT Sample Condition: Dry Temperature: 120°F (49°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	22.6	5	8'	7.94	120	702	
	2	22.7	0	8'	8.01	124	710	
	3	22.7	3	8'	8.01	127	742	
	Average				Drops 2, 3		126	726
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	24.0	5	9'	8.95	143	935	
	2	24.0	2	9'	8.95	141	887	
	3	24.0	5	9'	8.95	148	971	
	Average				Drops 2, 3		145	929
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	25.3	0	10'	9.95	160	1136	
2	25.3	2	10'	9.95	163	1144		
3	25.2	1	10'	9.87	157	1099		
Average				Drops 2, 3		160	1122	

COLD Sample Condition: Dry Temperature: 25°F (-6°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	22.6	3	8'	7.94	117	674	
	2	22.7	0	8'	8.01	125	727	
	3	22.7	1	8'	8.01	126	751	
	Average				Drops 2, 3		126	739
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	23.9	2	9'	8.88	130	859	
	2	23.9	7	9'	8.88	142	954	
	3	23.9	7	9'	8.88	134	867	
	Average				Drops 2, 3		138	911
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC	
	1	25.4	1	10'	10.03	143	996	
2	25.4	4	10'	10.03	155	1095		
3	25.3	1	10'	9.95	155	1081		
Average				Drops 2, 3		155	1088	

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