



TESTING SERVICES, INC.
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TEST REPORT

CLIENT:	X-Grass	REPORT NUMBER:	51069R
	PO Box 579	LAB TEST NUMBER:	2299-7333
	Rocky Face, GA 30740	DATE:	March 10, 2011
		PAGE:	1 of 2

Test Material: 80 oz/yd² Synthetic Turf

Infill: 2.0 lbs/ft² STF

Pad: 4 panels of 1" Playground Pad (total of 4" pad)

Tested Dimension: 18" x 18"

Sub Base: Concrete

Impact Location: Center of Test Material

Date of Receipt: February 24, 2011

Testing Period: February 25 -- March 9, 2011

Authorization: Lynette Ogle

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.

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

Test Equipment: Triax 2000 Surface Impactor
 Date of Last Calibration: 3/4/2010 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 750 or less

Ambient, 72°F (23°C) 13'

Hot, 120°F (49°C) 13'

Cold, 25°F (-6°C) 11'

Critical Fall Height (CFH): 11'

Reference Gmax Curves Included

Prepared and signed by:

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	26.5	6	11'	10.91	99	665
	2	26.5	6	11'	10.91	103	703
	3	26.5	1	11'	10.91	105	730
	Average			Drops 2, 3		104	717
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	27.7	10	12'	11.92	105	750
	2	27.7	7	12'	11.92	104	742
	3	27.6	10	12'	11.84	106	749
	Average			Drops 2, 3		105	746
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	28.8	8	13'	12.89	108	863
2	28.8	2	13'	12.89	108	829	
3	28.8	0	13'	12.89	115	926	
Average			Drops 2, 3		112	878	

HOT Sample Condition: Dry Temperature: 120°F (49°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	26.5	9	11'	10.91	80	487
	2	26.6	5	11'	11.00	83	510
	3	26.5	4	11'	10.91	85	521
	Average			Drops 2, 3		84	516
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	27.7	7	12'	11.92	86	556
	2	27.6	4	12'	11.84	93	634
	3	27.6	1	12'	11.84	95	655
	Average			Drops 2, 3		94	645
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	28.7	3	13'	12.80	86	579
2	28.7	2	13'	12.80	92	640	
3	28.7	2	13'	12.80	95	668	
Average			Drops 2, 3		94	654	

COLD Sample Condition: Dry Temperature: 25°F (-6°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	25.3	0	10'	9.95	110	728
	2	25.4	4	10'	10.03	115	762
	3	25.4	4	10'	10.03	121	805
	Average			Drops 2, 3		118	784
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	26.6	1	11'	11.00	120	906
	2	26.5	4	11'	10.91	128	962
	3	26.6	6	11'	11.00	134	1035
	Average			Drops 2, 3		131	999
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	27.7	6	12'	11.92	128	1028
2	27.7	3	12'	11.92	137	1081	
3	27.7	0	12'	11.92	141	1120	
Average			Drops 2, 3		139	1101	