



**TESTING SERVICES, INC.**  
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## TEST REPORT

CLIENT:	Robertson Industries	REPORT NUMBER:	48731
	4401 E. Baseline Road Suite 105	LAB TEST NUMBER:	2150-2268
	Phoenix, AZ 85042	DATE:	July 13, 2010
		PAGE:	1 of 2

**Product Description:** TT Synthetic Pro 3.25" (1.75" Pile Ht Synthetic Turf w/Thatch Layer infilled with 2.5 lbs/sq/ft 12-20 Silica Sand over 1.5" Ht Pour-In-Place

**Tested Dimension:** 18" x 18" X 3.25"

**Sub Base:** Concrete

**Impact Location:** Center of Test Material

**Date of Receipt:** May 10, 2010

**Testing Period:** June 23--29, 2010

**Authorization:** Steve Scaturro

**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: 3/24/2010 by Alpha Automation

**Sample Pre-Condition:** 50±10 RH, 7sF±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) 5'

Hot, 120°F (49°C) 5'

Cold, 25°F (-6°C) 5'

<b>Critical Fall Height (CFH):</b>	5'
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Reference Gmax Curves Included

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	16.2	3	4'	4.08	125	516
	2	16.3	6	4'	4.13	131	547
	3	16.3	2	4'	4.13	129	532
	Average	Drops 2, 3				130	540
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	18.1	6	5'	5.09	155	775
	2	18.0	1	5'	5.04	155	774
	3	18.1	2	5'	5.09	161	819
	Average	Drops 2, 3				158	797
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	19.7	1	6'	6.03	191	1145
2	19.8	1	6'	6.09	201	1236	
3	19.8	3	6'	6.09	204	1243	
Average	Drops 2, 3				203	1240	

HOT Sample Condition: Dry Temperature: 120°F (49°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	16.2	5	4'	4.08	132	553
	2	16.2	6	4'	4.08	137	585
	3	16.2	1	4'	4.08	139	601
	Average	Drops 2, 3				138	593
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	18.1	1	5'	5.09	163	884
	2	18.2	2	5'	5.15	165	884
	3	18.1	2	5'	5.09	168	908
	Average	Drops 2, 3				167	896
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	19.7	3	6'	6.03	203	1231
2	19.8	0	6'	6.09	217	1358	
3	19.8	2	6'	6.09	221	1389	
Average	Drops 2, 3				219	1374	

COLD Sample Condition: Dry Temperature: 25°F (-6°C)	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	16.2	5	4'	4.08	125	529
	2	16.3	6	4'	4.13	127	540
	3	16.3	6	4'	4.13	124	522
	Average	Drops 2, 3				126	531
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	18.0	4	5'	5.04	145	701
	2	18.1	2	5'	5.09	147	713
	3	18.1	2	5'	5.09	143	672
	Average	Drops 2, 3				145	693
	Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
	1	19.8	5	6'	6.09	167	929
2	19.8	5	6'	6.09	177	1012	
3	19.8	3	6'	6.09	177	1001	
Average	Drops 2, 3				177	1007	