

**TESTING SERVICES, INC.**

817 SHOWALTER AVE., PO BOX 2041  
 DALTON, GA 30722-2041  
 PHONE: (706)226-1400 FAX: (706)226-6118

Client: Airfield Systems  
 8028 North May Avenue Suite 201  
 Oklahoma City, OK 73120

Test: ASTM F1292: Impact Attenuation of Surface Systems in and Around  
 Playground Equipment

Turf ID	ATS Turf 69sl/st	Top
Infill	None	
Underlayment:	4 oz Filter Fabric	
Grid:	AirDrain	
Underlayment:	2 1/8" PolyGreen Foam	
Sub Base:	Concrete	Bottom

Conditions: Ambient, 83°F 39% RH      Report #: 62197      Page # 2 of 4  
 Date Tested: 9-Sep-14      Fall Height: 9'      Lab # 2650-1155-1

**Drop Area:****Center of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	23.9	7	9'	8.88	128	834
2	23.9	0	9'	8.88	133	884
3	23.9	0	9'	8.88	132	874
Average			Drops 2, 3		133	879

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	23.9	3	9'	8.88	122	767
2	23.9	2	9'	8.88	134	895
3	23.9	1	9'	8.88	141	964
Average			Drops 2, 3		138	930

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	23.9	0	9'	8.88	128	845
2	23.9	4	9'	8.88	132	871
3	23.9	3	9'	8.88	137	919
Average			Drops 2, 3		135	895

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	N/A	N/A	N/A	N/A	#VALUE!	N/A
2	N/A	N/A	N/A	N/A	#VALUE!	N/A
3	N/A	N/A	N/A	N/A	#VALUE!	N/A
Average			Drops 2, 3		#VALUE!	#VALUE!

Overall gmax (3 Locations, Three Drops Each Location in Same Spot) 135

Overall HIC (3 Locations, Three Drops Each Location in Same Spot) 901

OUR LETTERS AND REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. THESE LETTERS AND REPORTS ARE FOR THE USE ONLY OF THE CLIENT TO WHOM THEY ARE ADDRESSED AND THEIR COMMUNICATION TO ANY OTHERS OR THE USE OF THE NAME TESTING SERVICES, INC. MUST RECEIVE OUR PRIOR WRITTEN APPROVAL. THE REPORTS AND LETTERS, AND OUR NAME, OUR SEALS, OR OUR INSIGNIA ARE NOT UNDER ANY CIRCUMSTANCES TO BE USED IN ADVERTISING TO THE GENERAL PUBLIC.



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Infill	None	
Underlayment:	4 oz Filter Fabric	
Grid:	AirDrain	
Underlayment:	2 1/8" PolyGreen Foam	
Sub Base:	Concrete	Bottom

Conditions: Cold Min 8hrs @ 20°F Report #: 62296 Page # 3 of 4  
 Date Tested: 10-Sep-14 Fall Height: 9' Lab # 2650-1155-1

Drop Area:

**Center of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	24.0	6	9'	8.95	123	799
2	24.0	7	9'	8.95	131	858
3	24.0	5	9'	8.95	136	885
Average			Drops 2, 3		134	872

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	24.0	0	9'	8.95	133	908
2	24.0	3	9'	8.95	140	972
3	24.0	5	9'	8.95	147	1020
Average			Drops 2, 3		144	996

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	24.0	7	9'	8.95	129	859
2	24.0	3	9'	8.95	144	990
3	24.0	2	9'	8.95	150	1027
Average			Drops 2, 3		147	1009

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	23.9	7	9'	8.88	117	726
2	24.0	3	9'	8.95	124	786
3	24.0	2	9'	8.95	132	848
Average			Drops 2, 3		128	817

Overall gmax (4 Locations, Three Drops Each Location in Same Spot) 138  
 Overall HIC (4 Locations, Three Drops Each Location in Same Spot) 923

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Infill	None	
Underlayment:	4 oz Filter Fabric	
Grid:	AirDrain	
Underlayment:	2 1/8" PolyGreen Foam	
Sub Base:	Concrete	Bottom

Conditions: Hot Min 8 hrs @ 120°F Report #: 62197 Page # 4 of 4  
 Date Tested: 11-Sep-14 Fall Height: 9' Lab # 2650-1155-1

Drop Area:

**Center of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	24.0	7	9'	8.95	126	815
2	24.0	6	9'	8.95	133	868
3	24.1	3	9'	9.03	129	833
Average			Drops 2, 3		131	851

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	24.0	5	9'	8.95	130	859
2	24.0	3	9'	8.95	134	882
3	24.0	0	9'	8.95	135	895
Average			Drops 2, 3		135	889

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	23.9	8	9'	8.88	120	766
2	24.0	8	9'	8.95	131	862
3	23.9	1	9'	8.88	129	851
Average			Drops 2, 3		130	857

**Quadrant of Assembly**

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	N/A	N/A	N/A	#VALUE!	N/A	N/A
2	N/A	N/A	N/A	#VALUE!	N/A	N/A
3	N/A	N/A	N/A	#VALUE!	N/A	N/A
Average			Drops 2, 3		#VALUE!	#VALUE!

Overall gmax (4 Locations, Three Drops Each Location in Same Spot) 132  
 Overall HIC (4 Locations, Three Drops Each Location in Same Spot) 866

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