



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	
Pad System:	2 1/8" Polygreen Foam	
Grid:	Air Drain	
Sub Base:	Concrete	Bottom

Conditions: Ambient, 75°F 57% RH Report #: 62198 Page # 2 of 4
 Date Tested: 6-Oct-14 Fall Height: 8' Lab # 2653-1303

Drop Area:

Center of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.7	7	8'	8.01	121	723
2	22.7	4	8'	8.01	133	827
3	22.7	3	8'	8.01	137	849
Average			Drops 2, 3		135	838

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.7	3	8'	8.01	138	849
2	22.7	3	8'	8.01	139	867
3	22.7	6	8'	8.01	135	835
Average			Drops 2, 3		137	851

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.7	8	8'	8.01	126	765
2	22.7	3	8'	8.01	136	867
3	22.7	4	8'	8.01	129	812
Average			Drops 2, 3		133	840

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	9	8'	7.94	120	724
2	22.7	5	8'	8.01	135	837
3	22.7	7	8'	8.01	141	886
Average			Drops 2, 3		138	862

Overall gmax (4 Locations, Three Drops Each Location in Same Spot) 136
 Overall HIC (4 Locations, Three Drops Each Location in Same Spot) 848

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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 Playground Equipment

Turf ID	ATS Turf 69sl/st	Top
Infill	None	
Underlayment:	4 oz Filter Fabric	
Pad System:	1 1/8" Polygreen Foam	
Grid:	Air Drain	
Sub Base:	Concrete	Bottom

Conditions: Cold Min 8hrs @ 20°F Report #: 62198 Page # 3 of 4
 Date Tested: 7-Oct-14 Fall Height: 8' Lab # 2653-1303

Drop Area:

Center of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.7	4	8'	8.01	133	869
2	22.7	3	8'	8.01	144	960
3	22.7	1	8'	8.01	146	969
Average			Drops 2, 3		145	965

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	10	8'	7.94	122	754
2	22.6	8	8'	7.94	132	842
3	22.7	1	8'	8.01	138	901
Average			Drops 2, 3		135	872

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	6	8'	7.94	127	792
2	22.7	1	8'	8.01	142	927
3	22.7	3	8'	8.01	143	915
Average			Drops 2, 3		143	921

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	5	8'	7.94	127	779
2	22.6	7	8'	7.94	141	900
3	22.6	7	8'	7.94	138	879
Average			Drops 2, 3		140	890

Overall gmax (4 Locations, Three Drops Each Location in Same Spot) 141

Overall HIC (4 Locations, Three Drops Each Location in Same Spot) 912

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Turf ID	ATS Turf 69sl/st	Top
Infill	None	
Underlayment:	4 oz Filter Fabric	
Pad System:	1 1/8" Polygreen Foam	
Grid:	Air Drain	
Sub Base:	Concrete	Bottom

Conditions: Hot Min 8 hrs @ 120°F Report #: 62198 Page # 4 of 4
 Date Tested: 8-Oct-14 Fall Height: 8' Lab # 2653-1303

Drop Area:

Center of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	0	8'	7.94	138	860
2	22.7	8	8'	8.01	146	938
3	22.7	2	8'	8.01	146	935
Average			Drops 2, 3		146	937

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	4	8'	7.94	139	865
2	22.7	1	8'	8.01	141	889
3	22.7	7	8'	8.01	145	916
Average			Drops 2, 3		143	903

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	4	8'	7.94	128	772
2	22.7	5	8'	8.01	130	823
3	22.7	6	8'	8.01	131	821
Average			Drops 2, 3		131	822

Quadrant of Assembly

Drop #	Velocity ft/sec	Angle	Drop Ht/Actual	Drop Ht/Theoretical	Gmax	HIC
1	22.6	1	8'	7.94	136	842
2	22.7	3	8'	8.01	143	901
3	22.7	1	8'	8.01	144	914
Average			Drops 2, 3		144	908

Overall gmax (4 Locations, Three Drops Each Location in Same Spot) 141

Overall HIC (4 Locations, Three Drops Each Location in Same Spot) 892

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