



**CLIENT:**

Company:	Airfield Systems LLC
Address:	808 N May Street Suite 201 Oklahoma City, Ok 73120

**TEST MATERIAL:**

Date Material Received:	February 10, 2023
Material Type:	Synthetic Turf w/ Infill Over Air Drain
Material Condition:	Excellent, New
Turf Description:	X47
Infill System:	2.0 lbs/ft <sup>2</sup> Envirofill
Pad System:	Air Drain
Sub-Base:	Concrete

**TESTING METHODS REQUESTED:**

<i>Testing Services Inc. was instructed by the client to test for the following...</i>	
Standard:	ASTM F355a
Test Method:	Standard Test Method for Impact Attenuation of Playing Surface Systems and Materials

**SAMPLING PLAN:**

Sampling Date:	12/20/22
<ul style="list-style-type: none"> <li>Specimen sampling is performed in the sampling department at TSI.</li> <li>The sampling size of specimens is determined by the test method requirements.</li> <li>In the event a specific sampling size is not called for, a determination will be made based on previous testing experience, and approved for use by an authorized manager.</li> <li>All samples are subjected to the outside environmental conditions of temperature and relative humidity.</li> <li>Sample requiring pre-determined exposure to specified environmental conditions based on a specific test method, take place in the departments in which they are tested</li> </ul>	

**DEVIATION FROM TEST METHOD:**

<i>State reason for any Deviation from, Additions to, or Exclusions From Test Method.</i>
None

**TEST SCOPE:**

This test method determines cushioning properties of the playing surface system and materials under specific conditions. The playing surface tested is impacted at a specified velocity with a missile of given mass and geometry to determine the maximum value of g's encountered during impact. The missile, 9.1 kg (20 lbs), was released as to impact the center of the test assembly at a velocity of 3.43 meters/second at a drop height of 24". Three missile releases were made, allowing 60 ± 30 seconds between drops. The first drop was for assembly conditioning and the second and third drop used for averaging.

**TEST EQUIPMENT:**

Operating System:	TRIAX Touch A Missile System TS GMAX 2 UNIT	Calibration: Accelerometer #: 1904 Calibration Date: 9/24/20 valid thru 9/24/22
Missile Type, Weight:	(A) Cylindrical	
Missile Weight:	20 ± 0.11 lbs	
Missile Diameter:	Circular Face 20 ± 1.0 in <sup>2</sup>	
Drop Height:	24" (2 Feet) Guidance Thru Acrylic Tube, Bottom of Missile Face to Top of Turf Surface	

**TEST DATA:**

Test Conditions	75°F 41% RH
Test Date/Time	2/21/23 @ 3:21 PM
Overall Infill Depth:	Not Applicable

DROP 1 (GMAX)	DROP 2 (GMAX)	DROP 3 (GMAX)	AVERAGE GMAX
110	124	136	130

**Uncertainty:**

We undertake all assignments for our clients on a best effort basis. Our findings and judgments are based on the information to us using the latest test methods available. TSI can only ensure the test results for the specific items tested. Unless otherwise noted in the deviations sections of this report, all tests are performed in compliance with stated test method.  
 Test Report Approval:

Erle Miles, III, Lab Director Testing Services Inc.

TSI Accreditation: Our laboratory is accredited by the US Dept. of Commerce, National Institute of Standards and Technology: ISO/IEC 17025:2005. Our code # is: NVLAP 100108-0. TSI is a certified independent testing laboratory by the Synthetic Turf Council



Testing Services (TSI) LLC  
 817 Showalter Avenue  
 PO Box 1343  
 Dalton, GA 30721