www.testingservices-usa.com ▪ (706)226-1400
office@testingservices-usa.com

CLIENT:

Company:	Turf Distributors
Address:	4252 Rionedo Road
	Temecula, CA 92590
Requested By:	Dillon Georgian

TEST MATERIAL:

Date Material Received:	April 14, 2020
Material Type:	Synthetic Turf
Material Condition:	Excellent, New
Material ID:	Flow 75 Olive
Infill:	16 Grit Sand, to ¾" exposed tuft

TESTING METHODS REQUESTED:

Testing Services, Inc was instructed by the client to perform the following testing:			
Standard:	FIFA Section 17	Test Method:	Procedure for Simulated Mechanical Abrasion
Standard:	EN 15336	Test Method:	Surface for Sports Area, Exposure for Synthetic Turf to Simulated Wear (LiSport)

SAMPLING PLAN:

Sampling Date:	4/14/2020

- Specimen sampling is performed in the sampling department at TSI.
- The sampling size of specimens is determined by the test method requirements.
- 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.
- All samples are subjected to the outside environmental conditions of temperature and relative humidly.
- 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

TEST EQUIPMENT:

Wear Tester:	Deltec Manual 1.2m LiSport
Model #:	Y2017 1701003
Date of Mfg:	1/2017
Dimensions:	3070mm X 1300mm

PRINCIPLE:

This procedure simulates high levels of athletic use of the synthetic turf in an accelerated period of time under laboratory conditions. Two studded rollers were traversed to and fro over the infilled turf to produce mechanical action of the surface that occurs during normal use. This report details the effects of this mechanical action as it relates to degradation of the pile fiber.

The client, Turf Distributors, commissioned TS to evaluate simulated wear of submitted finished synthetic turf, referenced above, with the use of an infill system.

The results are indicative of mechanical wear only and do not take into account the effects of weathering, uv degradation, or use of the turf outside of competition.

PROCEDURE:

A test specimen, 560mm X 2438mm, was cut from the sample lot to be exposed to mechanical abrasion. The specimen was infilled with above listed infill. The rollers were positioned onto the surface of the system, with the pressure set automatically @ 1kg per cm. All speeds of the machine components were set in accordance with FIFA & CEN standards. The design of the machine ensures that the studs do not repeatedly impact the same spots.

The Lisport was activated for 1,000 cycles. At the end of the 1,000 cycles the pile fiber degradation was graded, a photo and fiber sample were taken.

DEVIATION FROM TEST METHOD:

State reason for any deviation from, additions to, or exclusions from test method:
None

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TEST MATERIAL:

Date Material Received:	April 14, 2020
Material Type:	Synthetic Turf
Material Condition:	Excellent, New
Material ID:	Flow 75 Olive
Infill:	16 Grit Sand, to ¾" exposed tuft
Measured Tuft Height:	38mm
Average Infill Depth:	20mm
Exposed Tuft Above Infill:	18mm

TEST RESULTS:

- A scale of 1 to 5 was used for descriptive evaluation of the pile fibers due to the effect of mechanical wear (Lisport) at each 1,000 cycle interval.
- The following is an explanation of the scale:

Rating	Description
1.0	None or Negligible
2.0	Slight
3.0	Moderate
4.0	Considerable
5.0	Severe

- The following was rated using the referenced rating scale: tuft loss, pile flattening, fiber splitting, and infill dispersion.

# of Cycles	Infill Dispersion	Tuft Loss	Pile Flattening	Fiber Splitting
1,000	1.0	1.0	3.0	1.5

CONCLUSION: Photographs of the overall view of the fibers are provided in the following appendixes.

Infill dispersion and tuft loss was negligible for the entire test duration. Fiber splitting was very slight. Pile flattening was very moderate.

APPENDIX A: Camera and Microscopic View of Fibers

Prior to any LiSport Exposure		
After 1,000 Cycles of LiSport Exposure		

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 (TSI) LLC

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 an Organizational Member of ASTM (American Society for Testing and Materials). TSi is a certified independent testing laboratory by the STC (Synthetic Turf Council).

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