

TEST REPORT

CLIENT:

| | | | |
|----------------------|--|------------------------------|-----------|
| Company: | Turf and Ivy Solutions | Report Number: | 79938D |
| Address: | 5 Centerpointe Dr, Ste 400, Lake Oswego, Oregon 97035 | Lab Test Number: | 3180-2872 |
| | | Test Completion Date: | 3/11/2020 |
| | | Report Date: | 3/13/2020 |
| Requested by: | Patricia Ochoa | Page: | 1 of 1 |

TEST MATERIAL:

| | | | | | | | |
|----------------------------|---|------------|--------------|--|-----------------------|-----------|------------------|
| Material Type: | Synthetic Turf | | | | Date Received: | 2/18/2020 | |
| Material Condition: | EXCELLENT: | XXX | GOOD: | | POOR: | | REJECTED: |
| Product ID: | Topaz | | | | | | |
| Infill System: | 1.0 lbs/ft ² 20/40 Silica Sand | | | | | | |

TESTING METHODS REQUESTED:

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|--|------------|---------------------|--|
| <i>Testing Services Inc. was instructed by the client to test for the following...</i> | | | |
| Standard: | ASTM F1551 | Test Method: | Standard Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials: Suffix-DIN 18-035, Part 6: Water Permeability of Synthetic Turf Systems and Permeable Bases |

SAMPLING PLAN:

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|---|-----------|
| Sampling Date: | 2/18/2020 |
| <ul style="list-style-type: none"> 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 humidity. 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 | |

PROCEDURE:

This test method determines the rainfall drainage capacity (permeability) of the playing surface. Test data values represent drainage rates vertically thru the turf with above listed infill, and do not take into account the percolation properties of a pad and/or an underlying sub base. Three specimens, 11.5" diameter, were cut from the 15' turf roll, side-center-side manner. Each turf specimen was securely fastened to the permeability tube using mechanical flanges, ensuring vertical water flow thru the product. The infill system was then installed. Water was pumped into the tube faster than could exit, until the water level reached 6". The water source was shut off, allowing the accumulated 6" water level to recede. The recede was timed via stopwatch until the water level exited the turf. The flow time was recorded in seconds. This procedure was repeated a total of 4 times where, the first pass was for conditioning, with passes 2,3,4 used for averaging. This process was repeated on the remaining specimens.

DEVIATION FROM TEST METHOD:

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|---|
| State reason for any Deviation from, Additions to, or Exclusions From Test Method. |
| None |

TEST SUMMARY:

| Specimen # | Drainage (Seconds) | gal/min/yd ² | Rainfall Capacity (inches/hour) |
|----------------|--------------------|-------------------------|---------------------------------|
| 1 | 95.3 | 21.2 | 65.1 |
| 2 | 115.7 | 17.5 | 53.6 |
| 3 | 85.6 | 23.6 | 72.4 |
| Average | 98.9 | 20.8 | 63.7 |

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: TSi is a certified independent testing laboratory by the Synthetic Turf Council

