

Product Specification Sheet

Sequoia

USES:

Landscape

Lawns

Playgrounds

Traffic Medians

Pet Areas

Commercial or Residential

Light-Heavy Traffic

SPECIFICATIONS:

Pile Height: 1-3/4"

Turf Gauge: 3/8"

Face Weight: 90 oz./yd²

Backing Weight: 22 oz./yd²

Total Weight: 112 oz./yd²

Stitch Rate: 20.5/10cm

Stitches/m2: 21525

Material/Dtex: PE14400 + PP 14400

Color: Emerald Green and Olive Green

with Brown and Green Thatching

Type Of Fiber: PE Monofilament and PP

Curled As Thatch

Report Date: August 20, 2012 Work Order: 12081511 Page Number: 1 of 1

Summary Report

Watersavers Turf 4316 Redwood Hwy, Ste 100 San Rafael, CA 94903

Project Location: U.S.A.
Project Name: Turf Test

Report Date: August 20, 2012

Work Order: 12081511

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
306805	Sequoia	turf	2012-08-13	00:00	2012-08-15

Sample: 306805 - S Blade-90

Param	Flag	Result	Units	RL
Total Lead		< 1.00	m mg/Kg	1



Certificate of Analysis Summary 627494

Watersavers Turf, San Rafael CA

Project Name: Turf Testing



Project Id: Turf Testing Series 10

Project Location: USA

Date Received in Lab: Tue Jun-11-19 04:00 pm

Report Date: 20-JUN-19
Project Manager: John Builes

	Lab Id:	627494-001			
Analysis Requested	Field Id:	Turf Series 10			
	Depth:				
	Matrix:	SOLID			
	Sampled:	Jun-07-19 00:00			
Total Lead	Extracted:	Jun-16-19 14:30			
SUB: T104704215-19-29	Analyzed:	Jun-17-19 22:56			
	Units/RL:	mg/kg RL			
Lead		<0.833 0.833			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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John Builes Project Manager



CERTIFICATE OF ANALYSIS

Client: Watersavers Turf

Product: Sequoia

Xenco Sample #: 627494

Lead Results: Less than one part per million

Synthetic fibers from turf product Sequoia, taken by Watersavers Turf 06-07-19, and received by Xenco Labs 06-11-19, were analyzed by Xenco Labs 06-17-19 for total lead by method ASTM G 2765-09 (EPA 6010). The results were less than one milligram lead per kilogram synthetic fiber (<1mg/KG).

Blan Latrurch	06/18/19
Dr Blair Leftwich Director	Date



CLIENT:

Company:	Watersavers Turf	Report Number:	67653B
Address:	4316 Redwood Hwy, Ste 100	Lab Test Number:	2820-8787
	San Rafael, CA 94903	Test Completion Date:	6/2/2016
		Report Date:	6/10/2016
		Page:	1 of 1

TEST MATERIAL:

Material Type:	Synthetic Turf					Date Received: 5/24/20		5/24/2016	
Material Condition:	EXCELLENT: XXX GOOD: POOR:			REJECTED:					
Style:	Sequoia								

TESTING METHODS REQUESTED:

TESTING METHO	ESTINO METHODS REQUESTED:							
Testing Services Inc. was instructed by the client to test for the following								
Standard: ASTM F1551 Test Method:		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:

Sampling Date: 5/24/2016

- 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

DEVIATION FROM TEST METHOD:

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

TEST SUMMARY:

TEST METHOD	TEST DESCRIPTION	TEST RESULT
ASTM F1551; Suffix-DIN 18-035, Part 6	Average Rainfall Capacity (Water Permeability)	88.1 inches/hour

^{*}Test data values represent drainage rates for the turf with infill only, and do not take into account the percolation properties of a sub-base and/or padding.

Infill System: 1.0 lbs/ft² Silica Sand # of Specimens (3) 11.5" Diamater

Tube: 10.75" OD 10.00" ID 8" Length (Beveled)

Tube Index Mark: 6"

Tube Weight: 39 lbs
Flange: 9.375" Diameter

Tube Flow Head: 2 Gallons

Pre-Conditioning: none

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 performed are in compliance with stated test method.

Test Report Approval:



Erle Miles, Jr. VP, 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.

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

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Release Date:	Control Type: Electronic – Expires 24 hours after this date: Jun. 13, 16					
	Printed copies are uncontrolled					



CLIENT:

Company:	Watersavers Turf	Report Number:	79556
Address:	4316 Redwood Hwy, Ste 100	Lab Test Number:	3173-2593
	San Rafael, CA 94903	Test Completion Date:	1/31/2020
		Report Date:	1/31/2020
		Page:	1 of 1

TEST MATERIAL:

Material Type:	Synthetic Turf	Synthetic Turf			Date Receive	Date Received: 1/24/2020		0
Material Condition:	EXCELLENT:	XXX	GOOD:	P00	₹:	REJECT	TED:	
Turf Identification:	S Blade Series							
Infill:	None							

TESTING METHODS REQUESTED:

Testing Services Inc. was instructed by the client to test for the following						
Standard:	ASTM D2859	Test Method:	Standard Test Method for Ignition Characteristics of Finished Textile Pile Yarn Floorcoverings			

SAMPLING PLAN:

Sampling Date: 1/24/2020

- 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 manage
- 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.

DEVIATION FROM TEST METHOD:

DEVIATION PROMITEST METHOD.	
	State reason for any Deviation from, Additions to, or Exclusions From Test Method.
	Specimens were not exposed to air circulating oven.

TEST SCOPE:

This test method provides a method of determining the flammability characteristics of textile products when exposed to an ignition source in a laboratory environment. Eight specimens were taken from the sample lot, 230mm X 230mm, and preconditioned in an air circulating oven @ 150°C for 2 hours. After removal from the oven, the specimens are placed into a desiccator for 1 hour prior to performing the test. Each specimen was then placed into the test chamber floor with the pile surface up and a steel frame, 230mm X 230mm with 200mm diameter hole, placed on top of the specimen. A methenamine tablet was placed centrically onto the pile surface. The pill was ignited using a lighted match, with the ignition flame and propagated flame allowed to self-extinguish.

CRITERIA:

The specimen passes, if the charred portion of the test specimen, did not extend to within 25mm (1") of the diameter hole of the steel frame. The U.S. Consumer Product Safety Commission requires that at least seven of the eight specimens pass the test for acceptance as meeting the standard.

TEST SUMMARY:

	TEST METHOD	TEST DESCRIPTION	TEST RESULT		
I	ASTM D2859-16	Ignition Characteristics of Textile Floor Coverings (Pill Test)	8 out of 8 Pass	Passes, U.S. CPSC 16CFR 1630 (FF1-70), Carpets & Rugs	

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 labor

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

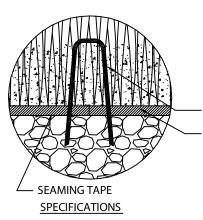




100108-0



WATERSAVERS TURF 4316 REDWOOD HWY, STE 100 SAN RAFAEL, CA 94903 1-844-974-8873



SOD STAPLE 6" x 1" x 6"

DRAINAGE PASS THROUGH FOR WATER IN PUNCHED HOLES THROUGHOUT BACKING

YARN TYPE POLYETHYLENE S SHAPE

BLADE

THATCH YARN TYPE POLYPROPYLENE CURLED

AS THATCH

PILE HEIGHT 1 3/4"

TURF GAUGE 3/8"

FACE WEIGHT 90 OZ YD

BACKING WEIGHT 20 OZ YD

TOTAL WEIGHT 110 OZ YD

STITCH RATE 14/10 CM

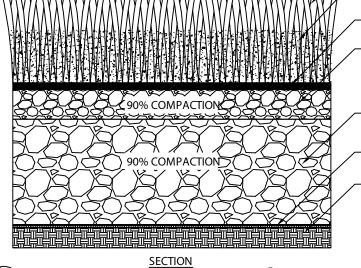
STITCHES/M² 14700

COLOR EMERALD GREEN AND OLIVE

GREEN WITH BROWN AND

GREEN THATCHING

ROLL SIZE (FEET) 15' x 75'



INFILL

SEQUOIA

WEED BARRIER

(OPTIONAL) 1 - 1 1/2" DECOMPOSED

GRANITE OR CLASS II

ROAD BASE

2 - 2 1/2" DRAIN ROCK

WIRE MESH (OPTIONAL)

SOIL (GROUND)

MAXIMUM DRAIN RATE>30 INCHES PER HOUR



SEAMING SOD STAPLES ARE **RECOMMENDED TO SEAM** THE SEAMS

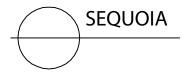


SECURING TURF TO BASE **BRIGHT COMMON 40D/60D** NAILS OR GALVANIZED NAILS 6' APART ALONG PERIMETER SEAMS.



POWER BROOM AFTER **INSTALLATION IS COMPLETE**

- 1. THE GRASS MUST BE INSTALLED AND SEAMED WITH ADJACENT PIECES RUNNING IN THE SAME DIRECTION. SEAMS SHOULD BE GLUED WITH SUITABLE SEAMING GLUE AND SEAMING CLOTH, OR GST RECOMMENDED SEAMING TECHNIQUES.
- 2. COLOR: EMERALD GREEN AND OLIVE GREEN WITH BROWN AND GREEN THATCHING.
- 3. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 4. DO NOT SCALE DRAWING.
- 5. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
- 6. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
- 7. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5006-012.





CLIENT:

Company:	Watersavers Turf	Report Number:	67653A
Address:	4316 Redwood Hwy, Ste 100	Lab Test Number:	2820-8787
	San Rafael, CA 94903	Test Completion Date:	6/6/2016
		Report Date:	6/10/2016
		Page:	1 of 1

TEST MATERIAL:

Material Type:	Synthetic Turf	Synthetic Turf				Date Received: 5/24/2016		6
Material Condition:	EXCELLENT:	EXCELLENT: XXX GOOD: POOR:			POOR:	RE	JECTED:	
Style:	Sequoia							

TESTING METHODS REQUESTED:

Testing Services Inc. was instructed by the client to test for the following						
Standard:	ASTM D5848	Test Method:	Standard Test Method for Mass Per Unit Area of Pile Yarn Floorcoverings			

SAMPLING PLAN:

Sampling Date: 5/24/2016

- 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

DEVIATION FROM TEST METHOD:

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

TEST SUMMARY:

. 20 . 00		
TEST METHOD	TEST DESCRIPTION	TEST RESULT
ASTM D5848-10e1	Total Product Weight	111.61 oz/yd²
ASTM D5848-10e1	Pile Yarn Weight	89.20 oz/yd²

Uncertainty:

We undertake all assignments for our clients on a best effort basis. Our findings and judgments are based on the information 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 performed are in compliance with stated test method.

Test Report Approval:

DNC confirst Milles, 2r. VP, or Sensitions live, ou, ernal n-twinffice given distras cn US Date: 2016.06.13 13:23:50

Erle Miles, Jr. VP, 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

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Release Date:	Control Type: Electronic – Expires 24 hours after this date: Jun. 13, 16			
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CLIENT:

Company:	Watersavers Turf	Report Number:	68711
Address:	4316 Redwood Hwy, Ste 100	Lab Test Number:	2853-0060
	San Rafael, CA 94903	Test Completion Date:	9/20/2016
		Report Date:	9/21/2016
		Page:	1 of 1

TEST MATERIAL:

Material Type:	Synthetic Turf	Synthetic Turf				Date Received:	9/1/2016
Material Condition:	EXCELLENT:	XXX	GOOD:		POOR:		ECTED:
Turf ID:	Sequoia						

TESTING METHODS REQUESTED:

. 20 1110 1112 1110 1120 120 120 120 1							
Testing Services Inc. was instructed by the client to test for the following							
Standard:	ASTM D1335	Test Method:	Standard Test Method for Tuft Bind Strength of Pile Yarn Floorcoverings				

SAMPLING PLAN:

Sampling Date: 9/1/2016

- 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

DEVIATION FROM TEST METHOD:

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

TEST SUMMARY:

TEST METHOD	TEST DESCRIPTION	TEST RESULT
ASTM D1335-13	Average Tuft Bind Strength	9.7 lbs/force

Each individual pull was made on Monofilament yarns, one needle site

L	Pull #1	9.337 lbs/force	Pull #2	8.215 lbs/force	Pull #3	7.087 lbs/force	Pull #4	13.27 lbs/force	Pull #5	7.017 lbs/force
	Pull #6	12.22 lbs/force	Pull#7	10.31 lbs/force	Pull #8	12.41 lbs/force	Pull #9	7.200 lbs/force	Pull#10	12.05 lbs/force
Ī	Pull #11	5.662 lbs/force	Pull #12	13.66 lbs/force	Pull #13	9.342 lbs/force	Pull #14	7.178 lbs/force	Pull #15	10.90 lbs/force

Uncertainty:

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Test Report Approval:



Erle Miles, III, Lab Director, Testing Services Inc

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Release Date:	Control Type: Electronic – Expires 24 hours after this date: Sep. 21, 16			
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CLIENT:

OLILIT.			
Company:	Watersavers Turf	Report Number:	79703
Address:	4316 Redwood Hwy, Ste 100	Lab Test Number:	3169-2416
	San Rafael, CA 94903	Test Completion Date:	2/18/2020
		Report Date:	2/19/2020
		Page:	1 of 1

TEST MATERIAL:

Material Type:	Synthetic Turf			Date Rec	eived:	2/5/2020		
Material Condition:	EXCELLENT:	XXX	GOOD:		POOR:		REJECTED:	
Product ID:	Seguoia							

TESTING METHODS REQUESTED:

Testing Services Inc. was instructed by the client to test for the following					
Standard:	ASTM D5034	Test Method:	Standard Test Method for Breaking Strength of Textile Fabrics (Grab)		

SAMPLING PLAN:

Sampling Date:	2/5/2020

- 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

DEVIATION FROM TEST METHOD:

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

TEST SUMMARY:

TEST METHOD	TEST DESCRIPTION	TEST RESULT
ASTM D5034-09(2017)	Average Grab Tear Strength of Length Direction (MD)	290.4 lbs/force
ASTM D5034-09(2017)	Average Grab Tear Strength of Width Direction (CMD)	238.6 lbs/force

Uncertainty:

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Test Report Approval:



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Technical Data Sheet: Sequoia

Product Properties:	Property	Imperial Unit	Metric Unit	Description
Properties:		Unit	Unit	Dalvathulana Manafilamant and
	Fiber Type			Polyethylene Monofilament and Polypropylene Curled as Thatch
				Polypropylerie Curied as ThatCit
	Fiber Mass	Denier 12960/12960	Detex 14400/14400	Polyethylene
		Monofilament	Monofilament	Polyethylene
	Pile Height	1.75 in	44.45 mm	
	Color(s)			Emerald Green and Olive Green with Brown and Green Thatching
	Tufting Gauge	.375 in	9.525 mm	-
	Stitch Rate	20.828/4in	20.5/10cm	
	Stitches	25,743.686/yd ²	21,525/m ²	
	Primary Backing	5.899 oz/yd ²	200.00 g/m ²	Polypropylene and Polyester fiber
	Secondary Backing	16.511 oz/yd ² ±5%	559.853 g/m ² ±5%	Urethane
	Total Backing Weight	22.41 oz/yd ² ±1.5oz	759.853 g/m ² ±50g	
	Micron	•	260	
Performance	Property	Imperial	Metric	Test Method
Properties:		Unit	Unit	
	Face Weight	89.20 oz/yd ²	3,024.491 g/m ²	ASTM D5848-10e1
	Total Weight	111.61 oz/yd²	3,784.344 g/m ²	ASTM D5848-10e1
	Permeability	88.1 in/ft²/hr	2,408.774 cm/m ² /hr	ASTM F1551; Suffix-DIN 18-035, Part 6
	Melting Point	176 °F for Blades (green) 250 °F for Thatch (brown and curled)	80 °C for Blades(green) 121 °C for Thatch (brown and green curled)	
	Tuft Bind	13.1 lb-f	58.272 N	ASTM-D1335-17e1
	Grab Tear MD	290.4 lb-f	1,291.764 N	ASTM-D5034-05
	Grab Tear CMD	238.6 lb-f	1,061.346 N	ASTM-D5034-05
	Grab Tear CMD Infill Amount (recommended)	238.6 lb-f ¾ of the Pile Height	1,061.346 N	ASTM-D5034-05
Dackasin -	Infill Amount (recommended)	¾ of the Pile Height		
Packaging:	-	% of the Pile Height Imperial	Metric	ASTM-D5034-05 Description
Packaging:	Infill Amount (recommended) Property	¾ of the Pile Height		Description
Packaging:	Infill Amount (recommended) Property Model Number	% of the Pile Height Imperial Unit	Metric Unit	
Packaging:	Property Model Number Roll Width	34 of the Pile Height Imperial Unit 15 ft	Metric Unit 4.57 m	Description
Packaging:	Infill Amount (recommended) Property Model Number	% of the Pile Height Imperial Unit	Metric Unit	Description