



LABOSPORT

TEST REPORT

Artificial Turf System - Primarily designed for football use

CCGrass Leap NE 27-J2 SPT

CoCreation Grass Corporation, Ltd.

LABORATORY TESTS REPORT N°: LSA-R24692-A1

Report Date: 2024.12.23

This report contains 10 pages in total.

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1. CLIENT DETAILS

Company: CoCreation Grass Co., Limited

Address: Floor 18, Dadi Building, No.56 Huaqiao Road, Nanjing, China

Contact: Leslie Liu, Tel: 0086 2569811637, E-mail: leslie_liu@ccgrass.com

Date of order: 2024.11.04

Sample reception date: 2024.11.04

2. PRODUCT DETAILS^①



Carpet / Yarns	Product Name	CCGrass Leap NE 27-J2 SPT		
	Manufacturer	CCGrass		
	Tuft pattern	Straight		
	Pile yarns	Yarn A	Yarn B	Yarn C
	Yarn Manufacturer	CCGrass	CCGrass	CCGrass
	Yarn name / code	Leap 1	Leap 2	Leap 3
	Pile yarn profile	Wave Olive	Olive	Flat
	Pile thickness [μm]	370	200	140
	Pile colour	Emerald / Olive Green	Emerald Green	Emerald Green
	Pile width [mm]	1.0	1.0	0.8
	No of tufts/m ²	23100		
	Pile length [mm]	27		
	Pile weight [g/m ²]	1,137	1,023	782
	Pile yarn dtex	8000	7200	5500
	Backing - name	PU		
	Backing - Manufacturer	CCGrass		
	Dry application rate [g/m ²]	900		

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	Tuft withdrawal force [N]	40
	Mass per unit area [g/m ²]	4,165
Joint	Method of jointing	Bonded
	Adhesive brand name	BH
	Adhesive manufacturer	BH
	Application rate [g/m]	300
	Jointing film brand name	YB
	Jointing film manufacturer	YB
Shock pad	Product name / code	3011-10mm
	Manufacturer	Various
	Type	Prefabricated
	Composition	Cross-Linked closed cell polyolefine foam
	Bulk density [g/cm ³]	0.04
	Thickness	10
	Shock absorption [%]	31
	Deformation[mm]	5.5
	Mass per unit area [kg/m ²]	0.4

^①The information above was provided and confirmed by CoCreation Grass Co., Limited.

3. TESTS PROGRAM

The following tests have been carried out on the surface in accordance with the following standard/test methods:

3.1 Artificial turf identification test:

- Total mass per unit area..... ISO 8543:2020
- Number of tufts per unit length and per unit area, gauge..... ISO 1763:2020
- Pile length above backing..... ISO 2549:1972
- Piles dtex^② Mass in g per 10,000m
- Total pile weight..... ISO 8543:2020
- Yarn profile / Yarn thickness^② Microscope
- Yarn characterisation-differential scanning calorimetry (DSC)..... ISO 11357-3:2018
- Tuft withdrawal force (Unaged)..... ISO 4919:2012
- Accelerated ageing by immersion in hot water..... EN 13744:2004
- Tuft withdrawal force (after immersion in hot water) ISO 4919:2012
- Carpet Vertical water permeability..... EN 12616:2023 Part 1 - Method A

3.2 Shock pad identification / performance test

- Thickness..... EN 1969:2000
- Total mass per unit area..... ISO 8543:2020
- Shock absorption..... CEN/TS 16717:2015
- Vertical deformation..... CEN/TS 16717:2015

3.3 Joint strength

- Joint strength (unaged)..... EN 12228:2013 Method 2
- Accelerated ageing by immersion in hot water..... EN 13744:2004
- Joint strength (after immersion in hot water)..... EN 12228:2013 Method 2

3.4 Artificial turf system performance test

- Sample preparation^② EN 12229:2014
- Shock absorption..... CEN/TS 16717:2015
- Vertical deformation..... CEN/TS 16717:2015
- Rotational resistance..... EN 15301-1:2007 (Football studs)
- Vertical ball rebound..... EN 12234:2004 (use of a football)
- Angle ball rebound^② High-speed camera
- Reduced ball roll^② Optically activated timing gate system

- Infill splash^② High-speed camera
- Surfaces temperature during exposure to infrared energy^② 3 hours exposure
- Vertical water permeability of artificial turf system..... EN 12616:2023 Part 1 - Method A
- Simulated wear with the Lisport XL (LXL)..... 6005 cycles

^②This item is not within the scope of CNAS accreditation in our laboratory.

The tests were carried out in laboratory and the tests conditions were:

- Temperature: 23°C±2°C,
- Humidity: 50%±5%.

4. TESTS RESULTS

component	Test Item	Method	Unit	Test Result	Declaration ^③
Artificial turf	Total mass per unit area	ISO 8543	g/m ²	4,395	4,165
	Number of tufts per unit area	ISO 1763	Tufts/m ²	23,450	23,100
	Pile length above backing	ISO 2549	mm	27.3	27
	Yarn A dtex - Leap 1	-	Dtex	7,968	8,000
	Yarn B dtex - Leap 2			6,629	7,200
	Yarn C dtex - Leap 3			5,160	5,500
	Total Yarn dtex			19,757	20,700
	Total pile weight	ISO 8543	g/m ²	2,973	2,942
	Tuft withdrawal force-Unaged	ISO 4919	N	66	40
	Tuft withdrawal force - after immersion in hot water			53	40
	Carpet Vertical water permeability	EN 12616 Part 1- Method A	mm/h	>2,000	≥180
Shock pad	Thickness	EN 1969	mm	10.0	10
	Total mass per unit area	ISO 8543	g/m ²	396	400
	Shock absorption	CEN/TS 16717	%	28.5	31
	Vertical deformation	CEN/TS 16717	mm	5.5	5.5
Joint	Joint strength (unaged)	EN 12228 Method 2	N/100mm	295	≥75
	Joint strength (after immersion in hot water)			154	

Artificial turf system	Shock absorption	Dry	CEN/TS 16717	%	63.6	N/A
		Wet			63.4	
		LXL 6005			60.6	
		50°C			64.0	
		-5°C			66.5	
	Vertical deformation	Dry	CEN/TS 16717	mm	10.9	N/A
		Wet			10.9	
		LXL 6005			10.3	
		50°C			10.8	
		-5°C			10.9	
	Rotational resistance	Dry	EN 15301-1:2007 (Football studs)	N·m	28.4	N/A
		Wet			27.9	
		LXL 6005			27.6	
	Vertical ball rebound	Dry	EN 12235:2004 Use a football	m	0.61	N/A
		Wet			0.63	
		LXL 6005			0.69	
	Angle ball rebound	Dry	Uses a high-speed camera	%	55	N/A
		Wet			52	N/A
	Reduced ball roll	Dry	Optically activated timing gate system	m	6.3	N/A
		LXL 6005-dry			6.8	N/A
		LXL 6005-wet			6.9	N/A
	Infill splash	Dry	Uses a high-speed camera	%	0	N/A
	Surfaces temperature	Dry	3h exposure to infrared	°C	64	N/A
	Vertical water permeability	-	EN 12616 Part 1 – Method A	mm/h	>2,000	N/A

³ Provided by the client.

REPORTED BY:



Niki Li

APPROVED BY:



Zhou Jieling

TECHNICAL MANAGER

GUANGZHOU LABOSPORT CO., LTD.

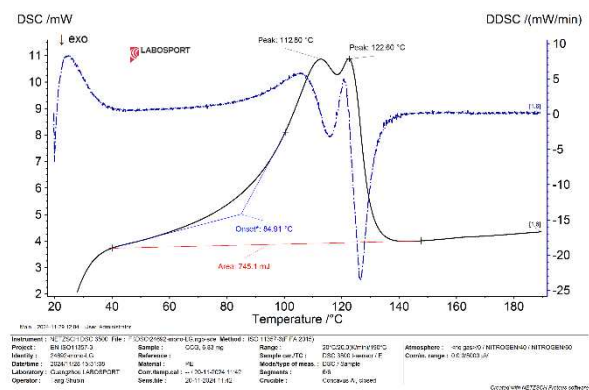
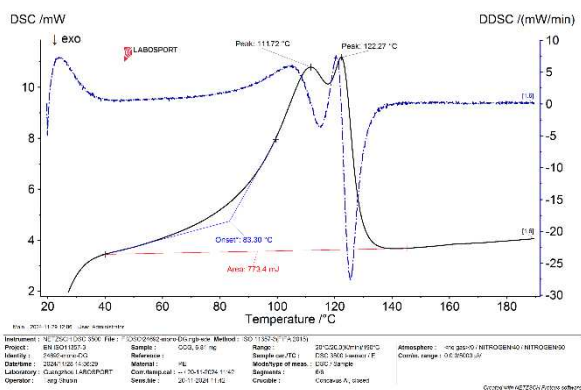
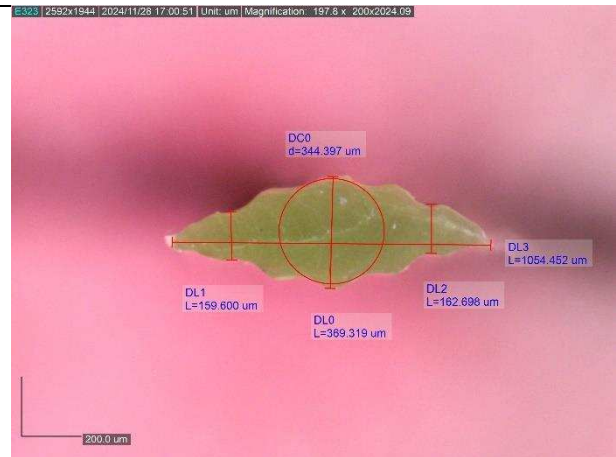
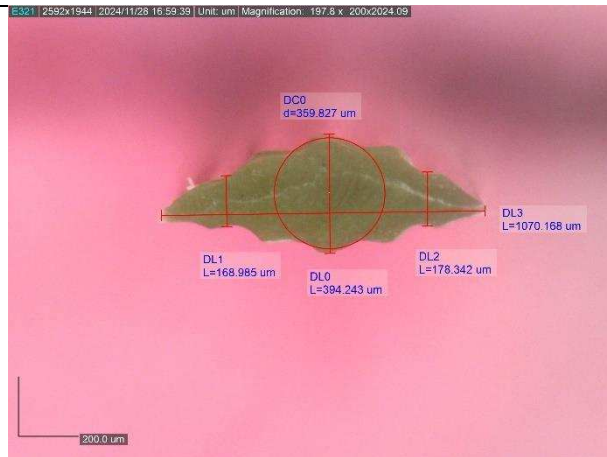
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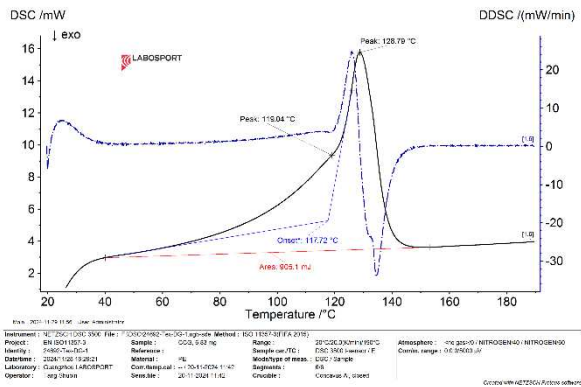
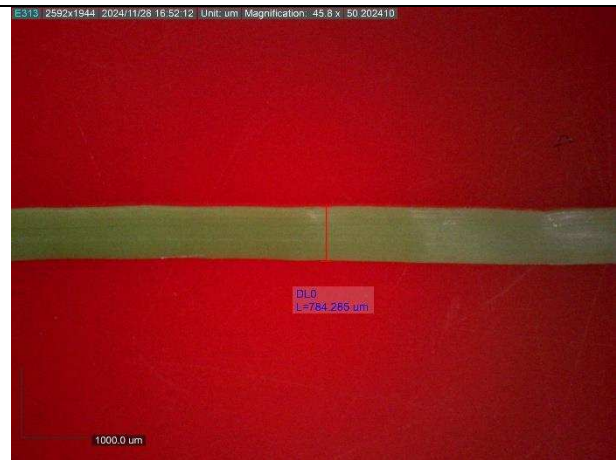
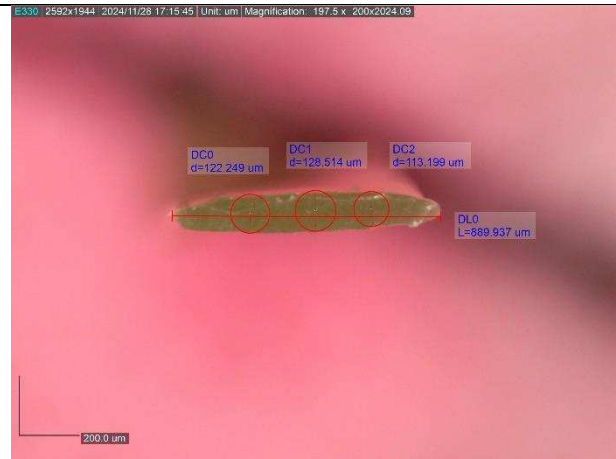
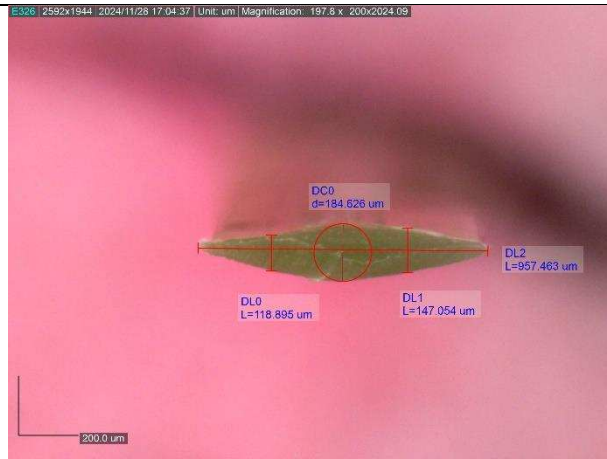
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APPENDIX 1 – Yarn Photo & DSC curve

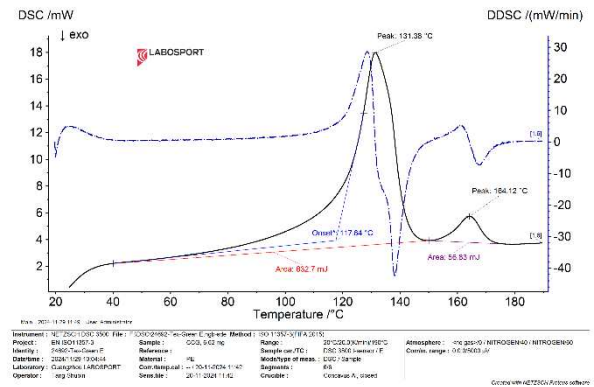


Yarn A: Leap 1 - Emerald Green

Yarn A: Leap 1 - Olive Green

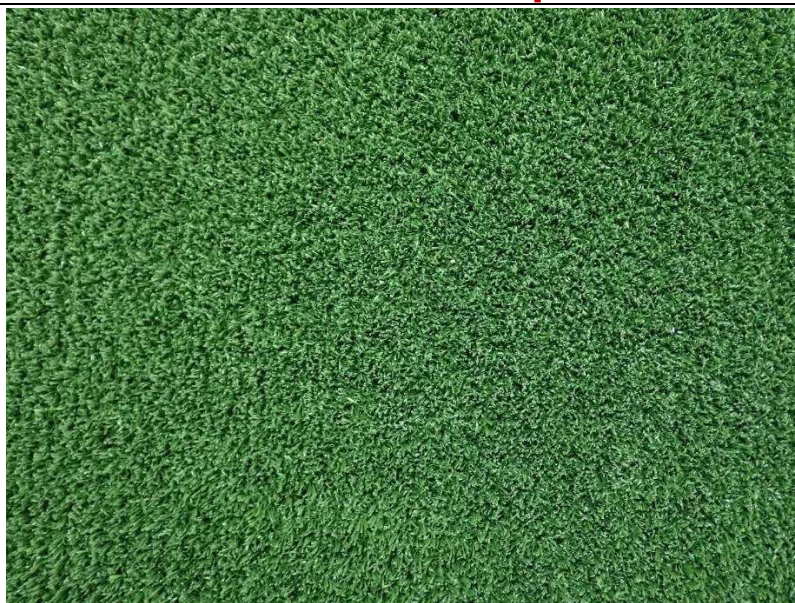


Yarn B - Leap 2 - Emerald Green

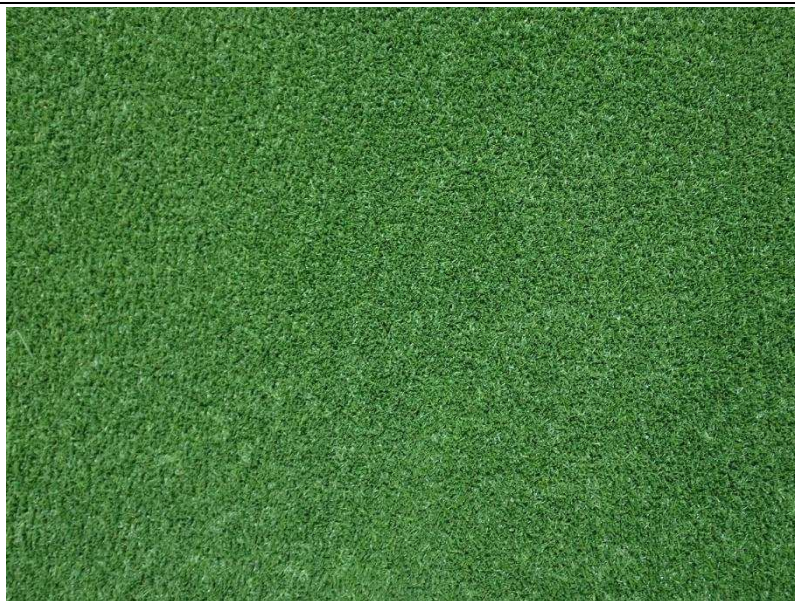


Yarn C - Leap 3 - Emerald Green

APPENDIX 2 – Before and after Lisport XL wearing photos



Before Lisport XL wearing



After 6005 cycles of Lisport XL simulated wear

~~~~~THE END~~~~~