












50 MM Football PROLineGRASS



-  High Resilience
-  Natural Experience
-  Best Tuft Bind
-  Eco Friendly
-  Texturing Process
-  Certifiable
-  Equal Ball Roll
-  Bi Colour
-  Reduced Glare



Soccerfoam 8/30 Non-FIFA & Multi Use

Shock absorbing underlay for artificial turf pitches. The product consists mainly of cross linked polythene foam board.

TECHNICAL SPECIFICATIONS

PROPERTIES	VALUE	UNIT	TEST METHOD
THICKNESS	8	MM	
DENSITY	30	KG / M3	ISO 845
TENSILE STRENGTH	0,19	mPa	ISO 1798
BREAKING STRAIN	80	%	ASTM D 3575 / 412
PERMANENT CRUSH (at 110kg/m ² pressure)	< 2,29	%	TS 2013 EN ISO 1856
THERMAL CONDUCTIVITY (λ)	0,035-0,040	W(MK)	TS 388 ISO 140/6-98
VERTICAL WATER PERMEABILITY	2195	mm/h	ISO 1663
WATER ABSORPTION	0,1761	(kg/m ²)	ASTM D3375-9,Suffix L
FIREPROOF GRADE	B2 B1	HARD FLAMMABLE NONFLAMMABLE	DIN 4102
APPLICATION TEMPERATURE	-80°C and +115°C		
SHOCK ABSORPTION	31	+/-45%	
COMBINED WITH SYNTHETIC TURF AND INFILL	64	%	
ENERGY RESTITUTION	49	%	
VERTICAL DEFPRMATION	5	%	

- ✔ Easy to install ✔ Excellent shock absorption and ball rebound.
- ✔ Good dimensional stability, dimensions are not influenced by temperture changes
- ✔ Ageing resistant ✔ The functional properties are stable in function of time.
- ✔ The foam does not rot nor pulverise. ✔ Good water permeability.
- ✔ Widths of > 2m are possible.



CERTIFICATE



This is to certify that

Çorlu Factory
Ergene / Tekirdağ
Turkey



[Handwritten signature]
d. No

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System.**

Scope:

Production and design, customs clearance, foreign trade, logistic management and administrative organization activities of machine tufted, wall to wall carpets and artificial grass.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	31300200 QM15
Valid from	2022-04-16
Valid until	2025-03-30
Date of certification	2022-04-16



DQS GmbH

[Handwritten signature of Markus Bleher]

Markus Bleher
Managing Director



CERTIFICATE



This is to certify that

İ İ
Çorlu Factory
Vel aniz
Ergen irdağ
Türkiye



with the organizational units/sites as listed in the annex

has implemented and maintains an **Occupational Health and Safety Management System.**

Scope:

Production and design, customs clearance, foreign trade, logistic management and administrative organization activities of machine tufted, wall to wall carpets and artificial grass.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 45001 : 2018

Certificate registration no. 31300200 OHS18
Valid from 2023-08-29
Valid until 2026-08-23
Date of certification 2023-08-29



DQS GmbH

Christian Gerling
Managing Director

DQS IS A MEMBER OF



Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS Denetim ve Belgelendirme Ltd. Şti., 19 Mayıs Mah. Sinan Ercan Cad.,
Paşa Korusu Sitesi No: 18/B1 Blok, 34736 Kadıköy - İstanbul / Turkey
The validity of this certificate can only be verified by the QR-code.



CERTIFICATE



This is to certify that

Çorlu Factory

Ve Organ

Ei ne / iğ

Türkiye



with the organizational units/sites as listed in the annex

has implemented and maintains an **Environmental Management System**.

Scope:

Production and design, customs clearance, foreign trade, logistic management and administrative organization activities of machine tufted, wall to wall carpets and artificial grass.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 14001 : 2015

Certificate registration no. 31300200 UM15
Valid from 2023-08-29
Valid until 2026-07-07
Date of certification 2023-08-29



DQS GmbH

Christian Gerling
Managing Director

DQS IS A MEMBER OF



Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS Denetim ve Belgelendirme Ltd. Şti., 19 Mayıs Mah. Sinan Ercan Cad.,
Paşa Korusu Sitesi No: 18/B1 Blok, 34736 Kadıköy - İstanbul / Turkey
The validity of this certificate can only be verified by the QR-code.



TÜRK STANDARDLARI ENSTİTÜSÜ
TÜRK STANDARDLARINA UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS

Markanın Tanımı Description of the Mark
TSE veya/or TSE veya/or T S E

BELGE NUMARASI
REFERENCE NUMBER OF LICENCE

011141-TSE-02/02

BELGENİN İLK VERİLİŞ TARİHİ
DATE OF FIRST ISSUE OF LICENCE

19.02.2024

BELGENİN SON GEÇERLİLİK TARİHİ
LICENCE VALID UNTIL

19.02.2025

BELGE SAHİBİ KURULUŞUN ADI
NAME OF THE LICENCE HOLDER

AKDOĞAN BULUT VE ORTAKLIĞI

BELGE SAHİBİ KURULUŞUN ADRESİ
ADDRESS OF THE LICENCE HOLDER

YELDEZ (M) İTİTAT K.C. :1 BAKIF
İSTANBUL/TÜRKİYE

ÜRETİM YERİ ADI
NAME OF THE MANUFACTURING PLACE

AKDOĞAN BULUT VE ORTAKLIĞI ÇOCUK İÇERİMLERİ

ÜRETİM YERİ ADRESİ
ADDRESS OF THE MANUFACTURING PLACE

YELDEZ (M) İTİTAT K.C. :1 ÜZERİNDEN
TEKİRDAĞ / TÜRKİYE

İPTAL EDİLEN BELGE NUMARASI (Varsa)
INDICATION OF SUPERSEDED LICENCE (if any)

011141-TSE-02/01

TESCİLLİ TİCARİ MARKASI
REGISTERED TRADE MARK

AKDOĞAN

İLGİLİ TÜRK STANDARDI
RELATED TURKISH STANDARD

TS EN 15330-1 / 03.11.2014

BELGE KAPSAMI
SCOPE OF LICENCE

SPOR ALANI YÜZEYLERİ - ÖZELİKLE AÇIK HAYADA KULLANIM İÇİN TASARIMLANAN SENTETİK ÇİMEN VE ÇOK KÜÇÜK GÖZENEKLİ YÜZEYLER, SENTETİK ÇİMEN
FUTBOL İÇİN TASARLANMIŞ YÜZEYLER - TP 6, BARBE EMİCKATMAN İÇERMEYEN

e-imzalı/e-signed

16.02.2024

Belgelendirme Merkezi Başkanı Adına
AKDOĞAN BULUT

İSTANBUL BELGELENDİRME MÜDÜRÜ V.

*Bu belge, belgelendirilen ürünün, üretim yerinin Enstitümüzün belirlediği şartları karşıladığını da gösterir.

*Bu belge, hiç bir suretle tahrif edilemez, kısmen veya bütünüyle zorlaştıracak şekilde çoğaltılamaz, kazını ve silinti yapılamaz.

*TSE İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ * Adres: Çayırova Tren İstasyonu Yanı ÇAYIROVA/GEBZE * Telefon: 2627231273 * Faks: 2627231606

*TSE BELGELENDİRME MERKEZ BAŞKANLIĞI; Adres: Necatibey Cad. No:112 06100 Bakanlıklar/ANKARA - Telefon: 0 312 416 64 81 / 416 64 27, Faks:0 312 416 66 17 E-posta: bmb@tse.org.tr , web : www.tse.org.tr





FIFA LABORATORY TEST REPORT

TM Football Turf | 2015
01.01.2015

Product	IRON GRASS
FIFA Licensee	M. [REDACTED] S.p.A.
Test Institute	Labosport Italia S.r.l.
Test Number	113894
External Test Number	21-0385IT
Date of Test	25.06.2021
Test Result	Passed
Quality Level	FIFA Quality & Quality PRO
Test Type	Initial



Licensee

Main Address

Name	[Redacted]
Address	Digitally signed by Rotari Radu Date: 2024.11.01 19:28:46 EET Reason: MoldSign Signature Location: Moldova
ZIP / City	061157 ISTANBUL
Website	
Contact Email	sal@rotari.com.tr
Contact Phone	


Test institute


Main Address

Name	Labosport Italia S.r.l.
Address	Via Monza, 80
ZIP / City	23870 / CERNUSCO LOMBARDONE
Website	www.labosport.com
Contact Email	labosport@labosport.it
Contact Phone	+39/ 039 896 26 84



Approval

Test Institute Director	Roberto Armeni
Signature	
Date	09.07.2021

Test Institute Engineer	Gabriele Greco
Signature	
Date	09.07.2021



1 – Test Results

Name	Comment	Result
1 - Summary		
Vertical ball rebound FIFA Quality		Passed
Vertical ball rebound FIFA Quality Pro		Passed
Angle ball rebound FIFA Quality		Passed
Angle ball rebound FIFA Quality Pro		Passed
Reduced ball roll FIFA Quality		Passed
Reduced ball roll FIFA Quality Pro		Passed
Shock absorption FIFA Quality		Passed
Shock absorption FIFA Quality Pro		Passed
Deformation FIFA Quality		Passed
Deformation FIFA Quality Pro		Passed
Rotational resistance FIFA Quality		Passed
Rotational resistance FIFA Quality Pro		Passed
Skin / surface friction		Passed
Skin abrasion		Passed
1 - Test Details Object		
Product Name		Splash Grass
Product ID		-
Synthetic Turf System		-
Performance infill		EPDM
Stabilising infill		SILICA
Shock-pad or elastic layer		-
Sub-base composition		Concrete
2 - Test Details Test Institute		
Date(s) of test		25.06.2021
Report created by		Gabriele Greco
Laboratory Test report number		21-0385IT



Name	Comment	Result
Test Institute Project number		21-0385IT
3 – Product Declaration (Manufacturer)		
Manufacturer		[REDACTED]
Tuft pattern		Straight
Yarn manufacturer yarn 1		TEN CATE GRASS MIDDLE EAST
Detailed tuft decitex (Dtex) [g/10000m]		6000
Product name, code yarn 1		Splash 2000 XQ Field Green
Pile yarn profile yarn 1		-
Pile thickness (µ m) yarn 1		330.0
Pile colour (RAL) value 1 yarn 1		6013
Pile colour (RAL) value 2 yarn 1		-
Pile colour (RAL) value 3 yarn 1		-
Pile width (mm) yarn 1		1.20
Number of tufts/m2 yarn 1	ISO1773	9000.00
Pile length (mm) yarn 1	ISO 2549	57.50
Pile weight (g/m2) yarn 1	ISO 8543	662.50
Pile yarn characterization yarn 1		PE
Pile yarn dtex yarn 1		6000
Yarn manufacturer yarn 2		TEN CATE GRASS MIDDLE EAST
Product name, code yarn 2		Splash 2000 XQ Lime Green
Pile yarn profile yarn 2		-
Pile thickness (µ m) yarn 2		330.0
Pile colour (RAL) value 1 yarn 2		1020
Pile colour (RAL) value 2 yarn 2		-
Pile colour (RAL) value 3 yarn 2		-
Pile width (mm) yarn 2		1.20



Name	Comment	Result
Number of tufts/m2 yarn 2	ISO1773	9000.00
Pile length (mm) yarn 2	ISO 2549	57.50
Pile weight (g/m2) yarn 2	ISO 8543	662.50
Pile yarn characterization yarn 2		PE
Pile yarn dtex yarn 2		6000.0
Yarn manufacturer yarn 3		-
Product name, code yarn 3		-
Pile yarn profile yarn 3		-
Pile thickness (µm) yarn 3		0.0
Pile colour (RAL) value 1 yarn 3		-
Pile colour (RAL) value 2 yarn 3		-
Pile colour (RAL) value 3 yarn 3		-
Pile width (mm) yarn 3		0.00
Number of tufts/m2 yarn 3	ISO1773	0.00
Pile length (mm) yarn 3	ISO 2549	0.00
Pile weight (g/m2) yarn 3	ISO 8543	0.00
Pile yarn characterization yarn 3		-
Pile yarn dtex yarn 3		0.0
Primary backing Product name, code		H18
Primary backing Manufacturer		Tencate
Re-enforcement scrim Product name, code		-
Re-enforcement scrim Manufacturer		-
Secondary backing Product name, code		SBR Latex



Name	Comment	Result
Secondary backing Manufacturer		Styron
Secondary backing Dry application rate (g/m ²)		1100.0
Carpet Minimum tuft withdrawal force (N)		40
Carpet Carpet mass per unit area [g/m ²]		2600.0
Method of jointing		Bonded
Bonded joints Adhesive brand name		Ayka Floor
Bonded joints Adhesive manufacturer		Ayka Floor
Bonded joints Application rate (g/m)		200
Bonded joints Jointing film brand name		Helmetin
Bonded joints Jointing film manufacturer		Serta Teksil
Stitched seams Tread brand name/product code		-
Stitched seams Tread manufacturer		-
Stitched seams Stitch rate (stitch per 1m)		0.000
Performance Infill Product name, code		EPDM RUBBER
Performance Infill Manufacturer		
Performance Infill Material type		BLACK EPDM
Performance Infill Material grading		1.6 - 3.15
Performance Infill Particle shape	prEN 14955	A2-B3
Performance Infill Particle size range	EN 933-Part 1	1.6 - 3.15



Name	Comment	Result
Performance Infill Bulk density (g/cm ³)	EN 1097-3	0.450
Performance Infill Application rate (kg/m ²)		19.0
Stabilising Infill Product name, code		Silica Sand
Stabilising Infill Manufacturer		Emek, Fares Kum
Stabilising Infill Material type		Silica
Stabilising Infill Material grading		0.315 - 0.8
Stabilising Infill Particle shape	prEN 14955	Round high sphericity-C1
Stabilising Infill Particle size range	EN 933-Part 1	0.315 - 0.8
Stabilising Infill Bulk density (g/cm ³)	EN 1097-3	1.50
Stabilising Infill Application rate (kg/m ²)		15.0
Shockpad, E-layer Product name, code		-
Shockpad, E-layer Manufacturer		-
Shockpad, E-layer Type		-
Shockpad, E-layer Composition		-
Shockpad, E-layer Bulk density (g/cm ³)		0.00
Shockpad, E-layer Thickness	EN 1969	0.0
Shockpad, E-layer Shock absorption (%)	FIFA 4a	0.0
Shockpad, E-layer Deformation	FIFA 5a	0.0
Shockpad, E-layer Tensile strength (MPa)		0.00
Shockpad, E-layer Mass per unit area (kg/m ²)		0.0
Other, detail		Due to different DSC devices and potential difference in the test method used, the shape



Name	Comment	Result
		and peak temperatures of the DSC analysis may differ from the FIFA requirement.
3 – Test Results Player / Surface Interaction		
Rotational Resistance Initial Dry (Quality)	27 - 48 Nm	39
Rotational Resistance Initial Dry (Pro)	32 - 43 Nm	39
Rotational Resistance Initial Wet (Quality)	27 - 48 Nm	37
Rotational Resistance Initial Wet (Pro)	32 - 43 Nm	37
Rotational Resistance after simulated wear 3'000 cycles (5*)	32 - 43 Nm	39
Rotational Resistance after simulated wear 3'000 cycles (20*)	32 - 43 Nm	0
Rotational Resistance after simulated wear 6'000 cycles (5*)	27 - 48 Nm	41
Rotational Resistance after simulated wear 6'000 cycles (20*)	27 - 48 Nm	0
3 – Test Results Product identification field product		
Performance infill Thermographic analysis Organic [%] - Product Declaration		0.0
Performance infill Thermographic analysis Elastomer [%] - Product Declaration		0.0
Performance infill Thermographic analysis Inorganic [%] - Product Declaration		0.0
4 – Product Identification		



Name	Comment	Result
Artificial Turf Carpet mass per unit area [g/m ²]		2772
Artificial Turf Tufts per unit area [m ²]		9450
Artificial Turf Pile length above backing [mm]		58.0
Artificial Turf Pile weight [g/m ²]		1346
Detailed tuft decitex (Dtex) [g/10000m]		11710
Artificial Turf Water permeability of carpet [mm/h]		2734
Artificial Turf Free pile height		13
Performance infill Particle size range [mm]		1.25 - 3.15
Performance infill Particle shape		A2
Performance infill Bulk density [g/cm ³]		0.470
Performance infill Infill depth [mm]		46
Performance infill Thermographic analysis organic [%]		48
Performance infill Thermographic analysis inorganic [%]		52
Stabilising infill Particle size range [mm]		0.315 - 1.0
Stabilising infill Particle shape		C1
Stabilising infill Bulk density [g/cm ³]		1.36
Shock pad / E-layer Shock absorption [%]	if part of supplied system	0.0
Shock pad / E-layer Deformation	if part of supplied system	0.0



Name	Comment	Result
Shock pad / E-layer Thickness	if part of supplied system	0.0
Other, detail		Pile yarn dtex yarn 1 declaration 6000 dtex; pile yarn 1 identification 5819 dtex -3.0%. Pile yarn dtex yarn 2 declaration 6000 dtex; pile yarn 2 identification 5891 dtex -1.8%.
5 – Test Results Ball / Surface interaction		
Vertical Ball Rebound Initial Dry (Quality)	0.6 - 1m	0.84
Vertical Ball Rebound Initial Dry (Pro)	0.6 - 0.85m	0.84
Vertical Ball Rebound Initial Wet (Quality)	0.6 - 1m	0.79
Vertical Ball Rebound Initial Wet (Pro)	0.6 - 0.85m	0.79
Vertical Ball Rebound after simulated wear 3'000 cycles (5*)	0.6 - 0.85m	0.84
Vertical Ball Rebound after simulated wear 6'000 cycles (5*)	0.6 - 1m	1.00
Vertical Ball Rebound after simulated wear 3'000 cycles (20*)	0.6 - 0.85m	0.00
Vertical Ball Rebound after simulated wear 6'000 cycles (20*)	0.6 - 1m	0.00
Angle Ball Rebound Dry	45 - 80 %	56
Angle Ball Rebound Wet	45 - 80 %	67
Reduced Ball Roll Initial Dry (Quality)	4 - 10 m	6.6
Reduced Ball Roll Initial Dry (Pro)	4 - 8 m	6.6
Reduced Ball Roll after simulated wear 3'000 cycles (5*) Dry	4 - 8 m	7.3



Name	Comment	Result
Reduced Ball Roll after simulated wear 3'000 cycles (5*) Wet	4 - 8 m	7.8
Reduced Ball Roll after simulated wear 3'000 cycles (20*) Dry	4 - 8 m	0.0
Reduced Ball Roll after simulated wear 3'000 cycles (20*) Wet	4 - 8 m	0.0
Reduced Ball Roll after simulated wear 6'000 cycles (5*) Dry	4 - 12 m	8.4
Reduced Ball Roll after simulated wear 6'000 cycles (5*) Wet	4 - 12 m	9.1
Reduced Ball Roll after simulated wear 6'000 cycles (20*) Dry	4 - 12 m	0.0
Reduced Ball Roll after simulated wear 6'000 cycles (20*) Wet	4 - 12 m	0.0
Shock absorption Initial Dry (Quality)	57 - 68 %	66.8
Shock absorption Initial Dry (Pro)	62 - 68 %	66.8
Shock absorption Initial Wet (Quality)	57 - 68 %	64.7
Shock absorption Initial Wet (Pro)	62 - 68 %	64.7
Shock absorption after simulated wear 3'000 cycles (5*)	62 - 68 %	62.4
Shock absorption after simulated wear 3'000 cycles (20*)	62 - 68 %	0.0
Shock absorption after simulated wear 6'000 cycles (5*)	57 - 68 %	59.1
Shock absorption after simulated wear 6'000 cycles (20*)	57 - 68 %	0.0



Name	Comment	Result
Shock absorption 50°C	57 - 68 %	66.70
Shock absorption -5°C	57 - 68 %	62.20
Other, detail		-
5 – Test Results Player / Surface interaction		
Deformation Initial Dry (Quality)	4 - 11 mm	10.0
Deformation Initial Dry (Pro)	4 - 10 mm	10.0
Deformation Initial Wet (Quality)	4 - 11 mm	9.5
Deformation Initial Wet (Pro)	4 - 10 mm	9.5
Deformation after simulated wear 3'000 cycles (5*)	4 - 10 mm	8.5
Deformation after simulated wear 3'000 cycles (20*)	4 - 10 mm	0.0
Deformation after simulated wear 6'000 cycles (5*)	4 - 11 mm	8.5
Deformation after simulated wear 6'000 cycles (20*)	4 - 11 mm	0.0
Skin / surface friction Dry	0.35 - 0.75 μ	0.51
Skin / surface friction Dry 3'000 cycles	0.35 - 0.75 μ	0.57
Skin / surface friction Dry 6'000 cycles	0.35 - 0.75 μ	0.63
Skin abrasion Dry	\pm 30 %	17
Skin abrasion Dry 3'000 cycles	\pm 30 %	20
Skin abrasion Dry 6'000 cycles	\pm 30 %	23
6 – Environmental impact (artificial, light, water)		
Pile yarn 1 Colour change after artificial weathering	\geq Grey scale 3	4-5
Pile yarn 2 Colour change after artificial weathering	\geq Grey scale 3	4



Name	Comment	Result
Pile yarn 3 Colour change after artificial weathering	≥ Grey scale 3	-
Pile yarn 1 Peak Breakage Force before artificial weathering		13.50
Pile yarn 1 Peak Breakage Force after artificial weathering		12.8
Pile yarn 1 Peak Breakage Force Green Reference value before artificial weathering		13.50
Pile yarn 1 Peak Breakage Force Variation after weathering from Green Reference value	Change ≤ 25 %	5.00
Pile yarn 2 Peak Breakage Force before artificial weathering		14.60
Pile yarn 2 Peak Breakage Force after artificial weathering		14.50
Pile yarn 2 Peak Breakage Force Green Reference value before artificial weathering		14.60
Pile yarn 2 Peak Breakage Force Variation after weathering from Green Reference value	Change ≤ 25 %	1.00
Pile yarn 3 Peak Breakage Force before artificial weathering		0.00
Pile yarn 3 Peak Breakage Force after artificial weathering		-
Pile yarn 3 Peak Breakage Force		0.00



Name	Comment	Result
Green Reference value before artificial weathering		
Pile yarn 3 Peak Breakage Force Variation after weathering from Green Reference value	Change \leq 25 %	0.00
Polymeric infill Colour change after artificial weathering	\geq Grey scale 3	5
Polymeric infill Visual change in composition after artificial weathering	No change	No change
Complete system Water permeability	$>$ 180 mm/h	1924
Stitched joints Strength un-aged	\geq 1000N/100mm	0
Stitched joints Strength water aged	\geq 1000N/100mm	0
Bonded joints Strength un-aged	\geq 75/100mm	100
Bonded joints Strength water aged	\geq 75/100mm	93
Carpet tuft Withdrawal force un-aged	\geq 40N	55
Carpet tuft Withdrawal force water aged	\geq 40N	54
Heat Category	for information	3
Splash Characteristics	for information	$>$ 1.5%
7 - Miscellaneous (shock pad, sub-base - if part of the system)		
Shock Pad / E-layer tensile strength un-aged	\geq 0.15 MPa	0.00
Sub-base Composition		-
Sub-base Particle size range		-
Sub-base Particle shape		-

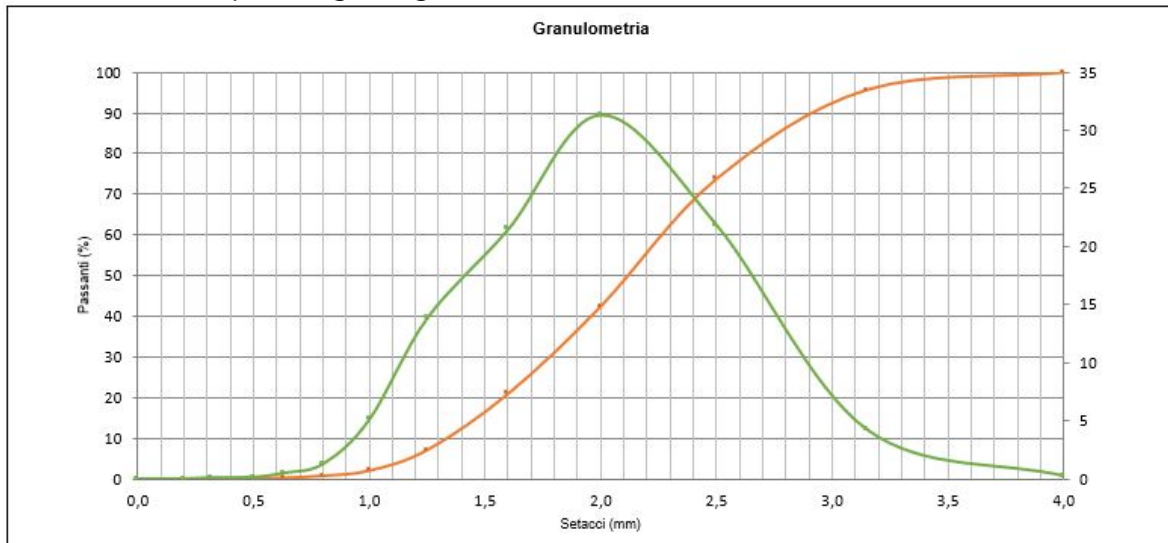


Name	Comment	Result
Sub-base Thickness		-
Sub-base Compaction & test method		-
Other, detail		-
Turf Product Report Details		
Shockpad, E-layer Type Category		No Shockpad
Performance Infill Material type Category		
Splash Characteristics Category		≥ 1.5%



2 – Test Images

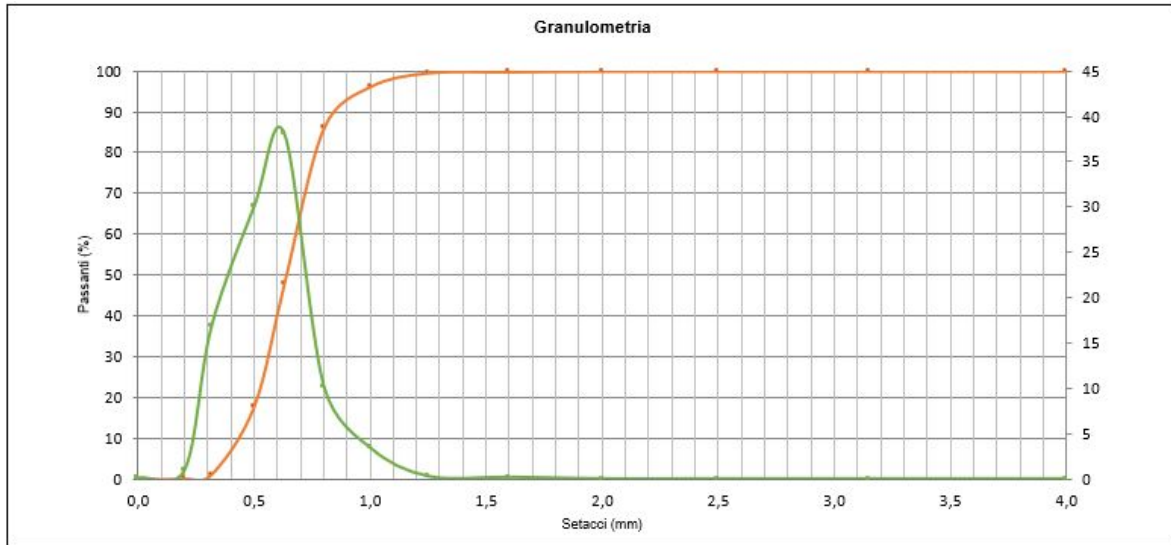
Performance infill particle grading curve



Setacci (mm)	0	0,2	0,315	0,5	0,63	0,8	1,0	1,25	1,6	2,0	2,5	3,15	4,0
Rifiutati (%)	0	0	0	0	0	1	5	14	21	31	22	4	0
Passanti (%)	0	0	0	0	0	1	2	7	21	42	74	96	100



Stabilising infill particle grading curve

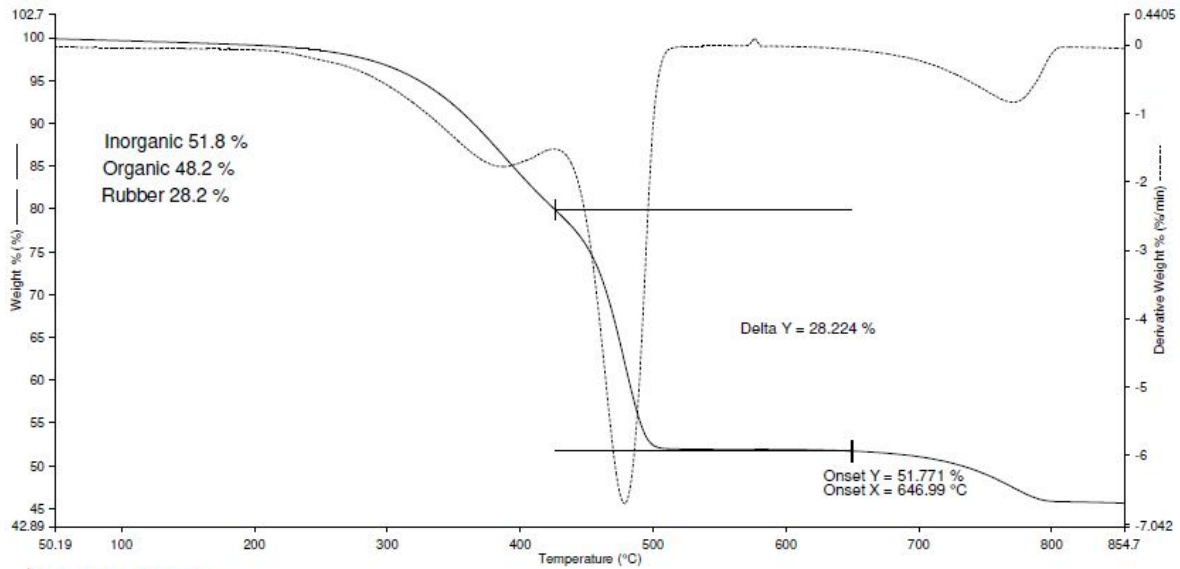


Setacci (mm)	0	0,2	0,315	0,5	0,63	0,8	1,0	1,25	1,6	2,0	2,5	3,15	4,0
Rifiutati (%)	0	1	17	30	38	10	3	0	0	0	0	0	0
Passanti (%)	0	0	1	18	48	86	96	100	100	100	100	100	100



TGA of performance infill

Data Collected: 22/06/2021 12:15:03	— OI210335: 21-0385 IT Black (2885-01).16d
Operator ID: AKI	Weight % (%): Steps: 1-3
Sample ID: OI210335	- - - OI210335: 21-0385 IT Black (2885-01).16d
Sample Weight: 57.985 mg	Derivative Weight % (%/min) (Smoothed): Steps: 1-3
Initial Purge Gas: Argon	
Comment: PerkinElmer TGA4000 - Serial number 522A2092805 - calibration : alumel / perkalloy / iron	



02/07/2021 15:35:33

1) Hold for 1.0 min at 50.00°C	3) Hold for 1.0 min at 850.00°C
2) Heat from 50.00°C to 850.00°C at 10.00°C/min	



Simulated wear - Before 1





Simulated wear - Before 2





Simulated wear - After 1





Simulated wear - After 2



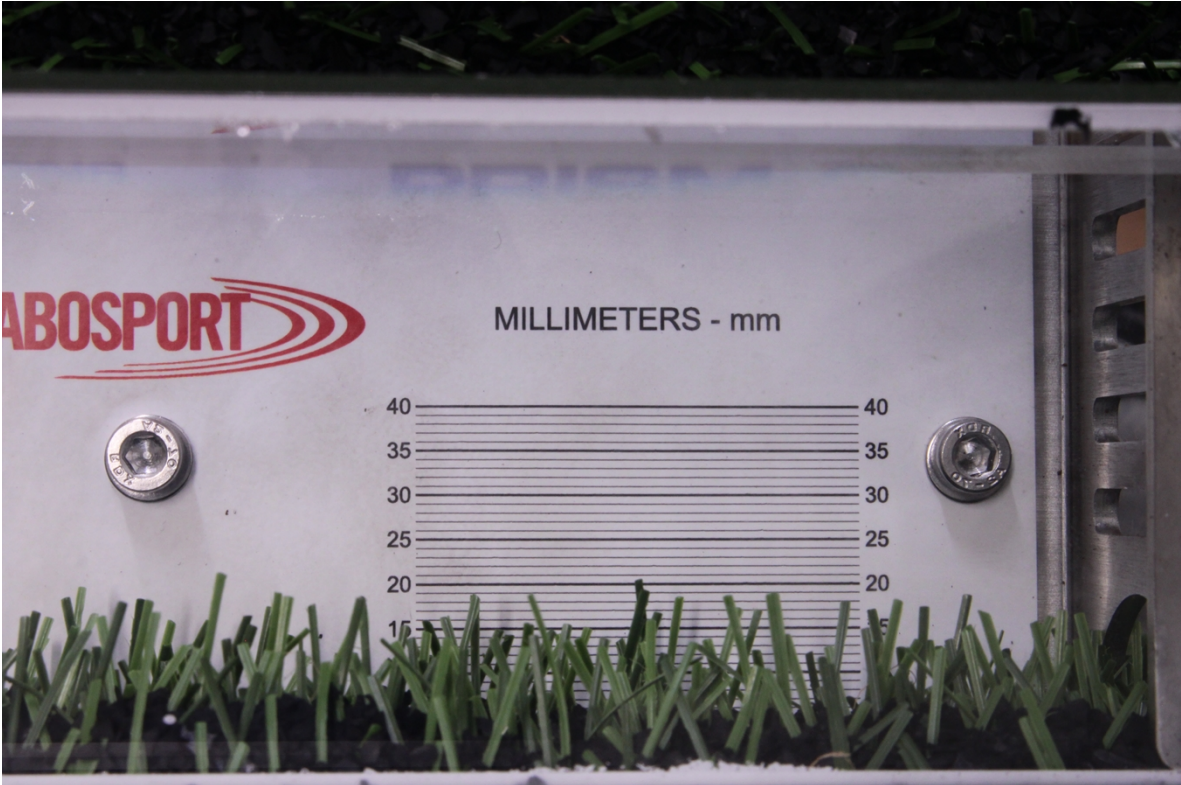


Simulated wear - After 3





Simulated wear - After 4

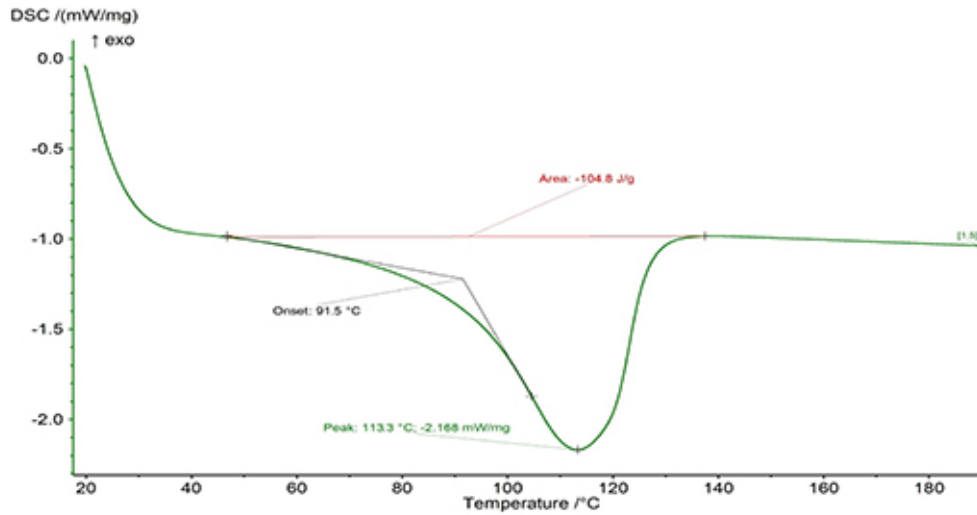




Yarn Characteristics DSC



Laboratory:	Labosport Italia Srl	Identity:	21-0385/T
Project:	21-0385/T	Sample:	DARK GREEN
Operator:	Matteo	Sample mass:	7.88 mg
Date/Time:	08/06/2021 12:09:36	Serial number:	DSC3500A-1254-L



TEST CYCLES:

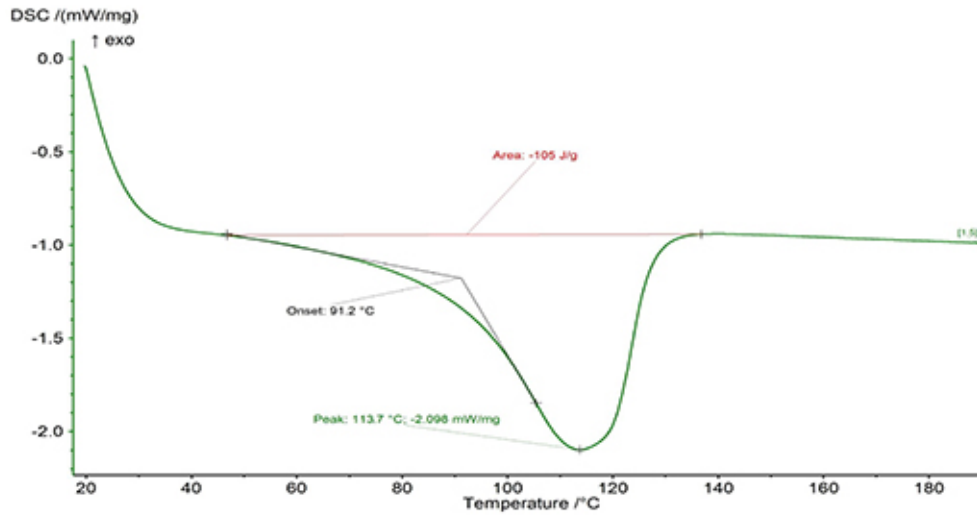
- | | | |
|---|---|---|
| 1) Heat from 20.0 °C to 190.0 °C at 20.0 °C/min | 3) Cool from 190 °C to 20.0 °C at 20.0 °C/min | 5) Heat from 20.0 °C to 190.0 °C at 20.0 °C/min |
| 2) Hold for 5.0 min at 190.0 °C | 4) Hold for 5.0 min at 20.0 °C | NETZSCH DSC 3500 SERIES |



Yarn Characteristics DSC - 2



Laboratory:	Labosport Italia Srl	Identity:	21-0385/T
Project:	21-0385/T	Sample:	LIGHT GREEN
Operator:	Matteo	Sample mass:	7.93 mg
Date/Time:	08/06/2021 12:56:27	Serial number:	DSC3500A-1254-L



TEST CYCLES:

- | | | |
|---|---|---|
| 1) Heat from 20.0 °C to 190.0 °C at 20.0 °C/min | 3) Cool from 190 °C to 20.0 °C at 20.0 °C/min | 5) Heat from 20.0 °C to 190.0 °C at 20.0 °C/min |
| 2) Hold for 5.0 min at 190.0 °C | 4) Hold for 5.0 min at 20.0 °C | NETZSCH DSC 3500 SERIES |

Stabilising Infill - picture

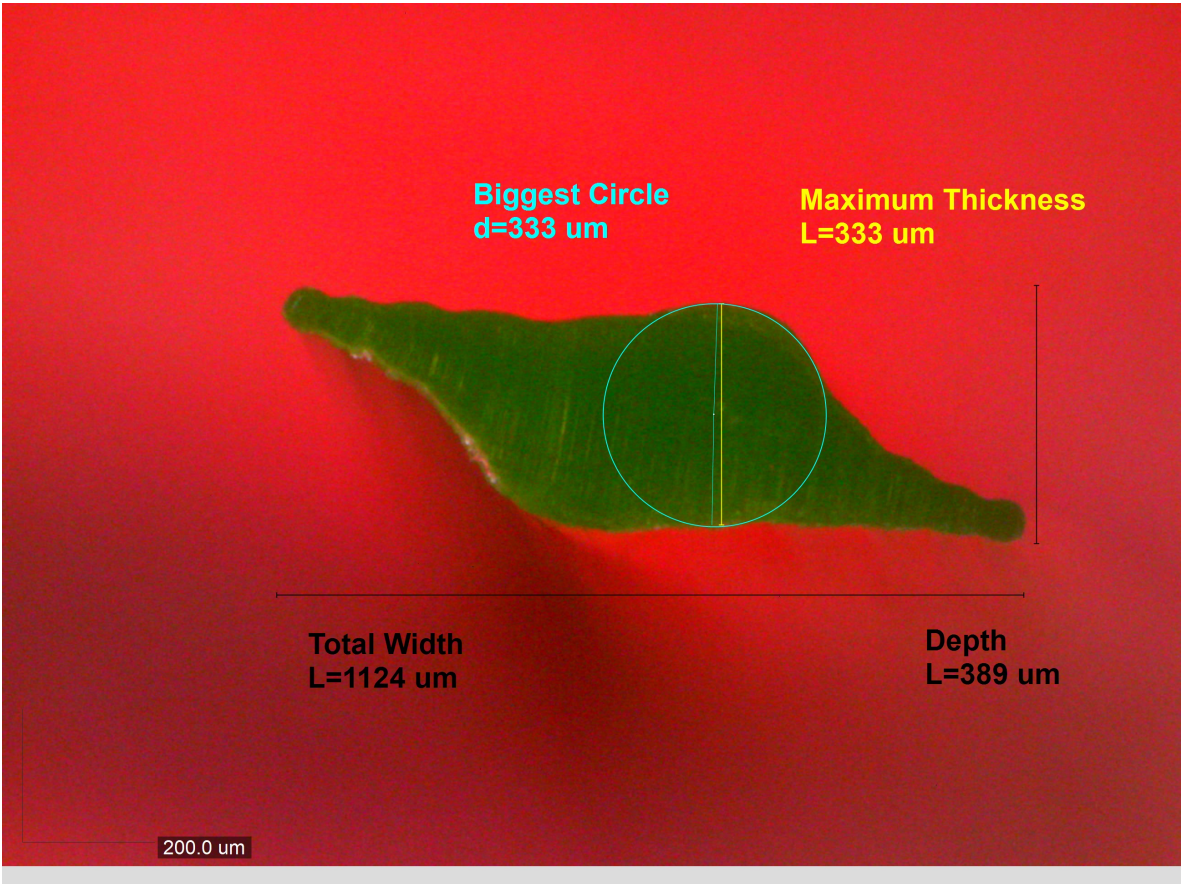


Performance Infill - picture



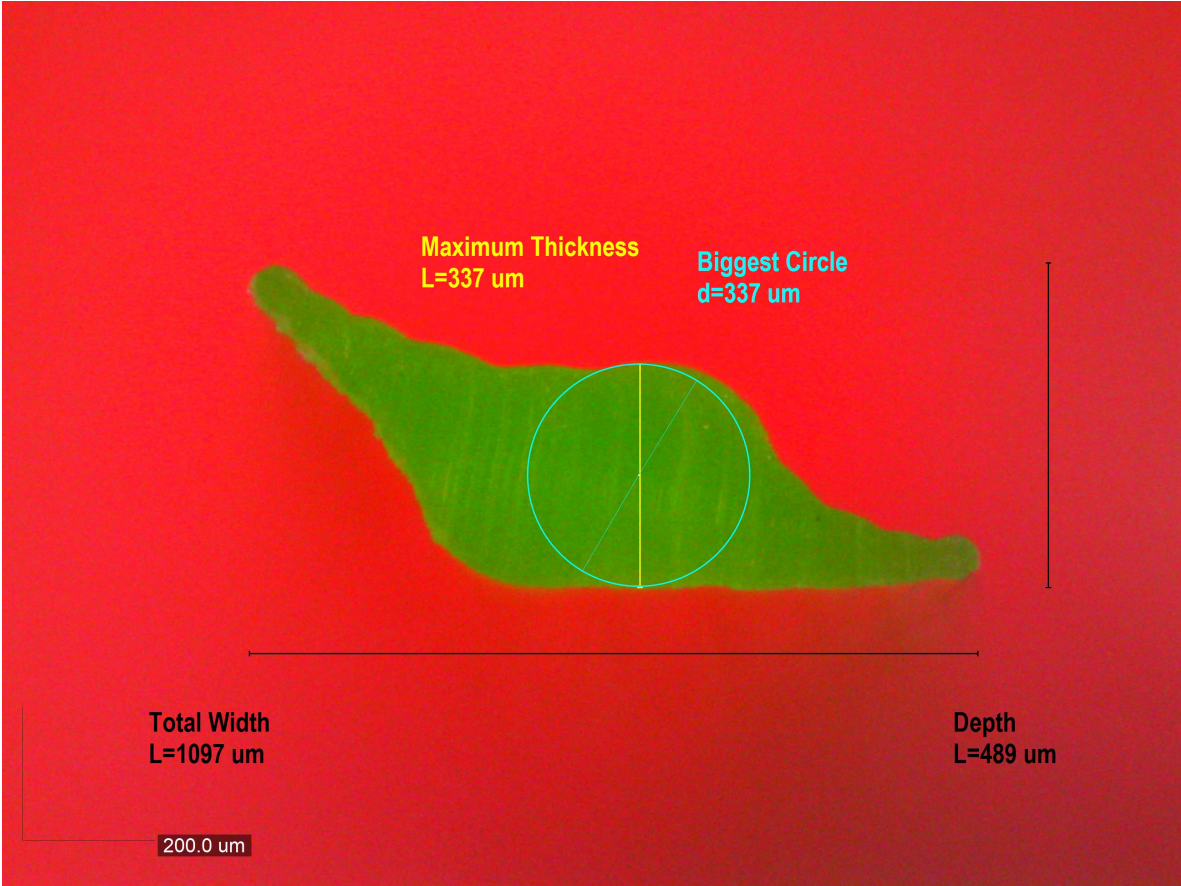


Cross-section Yarn 1





Cross-section Yarn 2





CERTIFICATE



This is to certify that

Optimum SLV rlu actc
lime ganiz 19. Böl. 1ah. - Cad. 1/1
Ergene / Tekirdağ
Türkiye

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:

Design and production, customs clearance, foreign trade, logistic management and administrative organization activities of machine tufted, wall to wall carpets and artificial grass.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no. 31300200 QM15
Valid from 2025-04-18
Valid until 2028-03-30
Date of certification 2025-04-18



DQS GmbH

Guido Eggers

Guido Eggers
Managing Director

DQS IS A MEMBER OF



Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS Denetim ve Belgelendirme Ltd. Şti., 19 Mayıs Mah. Sinan Ercan Cad.,
Paşa Korusu Sitesi No: 18/B1 Blok, 34736 Kadıköy - İstanbul / Turkey
The validity of the certification can only be verified by the QR-code.

TEST REPORT

22-0405IT

Issued on December 16th 2022

CLIENT

Digitally signed by Rotari Radu
Date: 2026.04.17 17:26:34 EEST
Reason: MoldSign Signature
Location: Moldova



PRODUCT

MOLDOVA EUROPEANĂ

GRASS

TOTAL CYCLES

80000 CYCLES

Laboratory tests

Labosport Italia S.r.l

Via Monza, 80 – 23870 CERNUSCO LOMBARDONE (LC)
Tel. +39 039 896.26.84 – Tel. +39 039 990.88.77
Fax +39 039 968.51.68

www.labosport.it
labosport@labosport.it
Pag 1 di 10
RP311-001 del 24/11/2022



TEST LIST AND TESTING CONDITIONS	3
IMPORTANT INFORMATION	3
SUBJECT	3
REFERENCE DOCUMENTS	3
STORAGE TIMES.....	3
SAMPLING.....	3
LOCATION OF PERFORMANCE OF THE TESTS	3
APPLICANT	3
ACQUISITION DATA	3
GENERAL DESCRIPTION OF THE METHOD	3
TEST RESULTS (PICTURES).....	4
IMAGES AT 0 CYCLES.....	4
IMAGES AT 5000 CYCLES.....	4
IMAGES AT 10000 CYCLES.....	4
IMAGES AT 15000 CYCLES.....	5
IMAGES AT 20000 CYCLES.....	5
IMAGES AT 25000 CYCLES.....	5
IMAGES AT 30000 CYCLES.....	6
IMAGES AT 35000 CYCLES.....	6
IMAGES AT 40000 CYCLES.....	6
IMAGES AT 45000 CYCLES.....	7
IMAGES AT 50000 CYCLES.....	7
IMAGES AT 55000 CYCLES.....	7
IMAGES AT 60000 CYCLES.....	8
IMAGES AT 65000 CYCLES.....	8
IMAGES AT 70000 CYCLES.....	8
IMAGES AT 75000 CYCLES.....	9
IMAGES AT 80000 CYCLES.....	9
COMPARISON 0 CYCLES – 80000 CYCLES.....	9
STRUMENTS USED.....	10
ADDITIONS, DEVIATIONS OR EXCLUSIONS FROM THE TEST METHOD.....	10
COMMENTS RELATED TO TESTS.....	10
ADDITIONAL INFORMATIONS.....	10

TEST LIST AND TESTING CONDITIONS

FIFA Test Method 15 – Procedure for the determination of wear on artificial turf (Lisport XL)

Conditioning of the sample non required.

Test performed at a temperature of $23\text{ °C} \pm 5\text{ °C}$.

IMPORTANT INFORMATION

Reproduction of this test report is only authorized in its entirety.

The results are intended to be valid only for the surfaces tested as received.

The laboratory declines all responsibility for all information provided by the customer.

SUBJECT

Determination of wear on artificial turf provided by the customer as an indicator in the section "Test list and testing conditions".

REFERENCE DOCUMENTS

FIFA Quality Programme for Football Turf - Handbook of Test Methods V3.1 - October 2015 Edition

FIFA Test Method 15 – Procedure for the determination of wear on artificial turf (Lisport XL)

STORAGE TIMES

Documents are stored for 4 years and samples 1 month from the issue of the Test report.

SAMPLING

The sampling is carried out by the customer.

LOCATION OF PERFORMANCE OF THE TESTS

The tests are carried out at Labosport Italia Srl premises.

APPLICANT

Company

Address

[Redacted]
[Redacted]
[Redacted]
[Redacted]
Bakirköy Istanbul

Country

Turkey

ACQUISITION DATA

Order received on	June 16 th 2022
First sample received on	June 17 th 2022
Last sample received on	June 17 th 2022
Beginning of tests	July 01 st 2022
Ending of tests	November 17 th 2022

GENERAL DESCRIPTION OF THE METHOD

The test specimen has been fixed to the floor to ensure that there is no movement during the wear simulation, was filled with 8 kg/m^2 of sand and 15 kg/m^2 of black SBR and abraded for 80000 cycles by Lisport XL.

Every 1000 cycles the machine was stopped, re-fill any dislodged infill and the sample was lightly brushed. Take photographs of the fiber every 5000 cycles.

TEST RESULTS (PICTURES)

IMAGES AT 0 CYCLES



IMAGES AT 5000 CYCLES



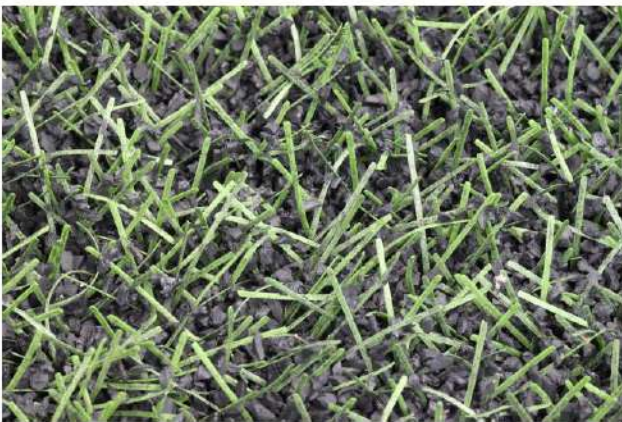
IMAGES AT 10000 CYCLES



IMAGES AT 15000 CYCLES



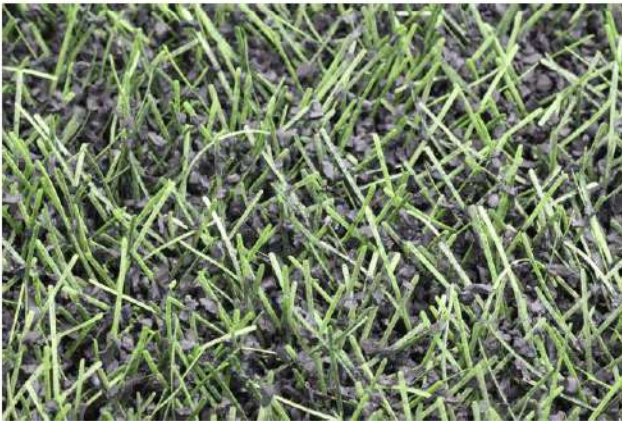
IMAGES AT 20000 CYCLES



IMAGES AT 25000 CYCLES



IMAGES AT 30000 CYCLES



IMAGES AT 35000 CYCLES



IMAGES AT 40000 CYCLES



IMAGES AT 45000 CYCLES



IMAGES AT 50000 CYCLES



IMAGES AT 55000 CYCLES



IMAGES AT 60000 CYCLES



IMAGES AT 65000 CYCLES



IMAGES AT 70000 CYCLES



IMAGES AT 75000 CYCLES



IMAGES AT 80000 CYCLES



COMPARISON 0 CYCLES – 80000 CYCLES



0 cycles



80000 cycles

STRUMENTS USED

FIFA Test Method 15 – Procedure for the determination of wear on artificial turf (Lisport XL)

Equipment	Manufacturer	Model	Technical sheet
Lisport XL	Labosport International	Lisport XI	STR321

ADDITIONS, DEVIATIONS OR EXCLUSIONS FROM THE TEST METHOD

None.

COMMENTS RELATED TO TESTS

None.

ADDITIONAL INFORMATIONS

None.



Laboratory Director
Roberto Armeni



----- End of the Test Report -----