SPORTS LABS

TESTING TECHNOLOGY FOR SPORT

Laboratory Analysis Report

BS EN 14904: 2006

Surfaces for Sports Areas – Indoor Surfaces for Multi-Sports Use

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CHIMIVER SPA

Report Number: 61446/1397

Report Status: Final

Client: Chimiver Panseri s.p.a.

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sportslabsconsult

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A SPORTS LABS COMPANY

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REGIONAL LOCATIONS
- USA
- Morocco
- Turkey
- South Africa
- Netherlands
- Belgium
- Norway
- Israel

Foreword

This report has been prepared by Sports Labs Ltd with all reasonable skill, care and diligence within the terms of the contract with the Client and within the limitations of the resources devoted to it.

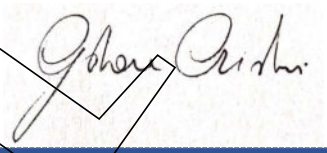
This report is confidential to the Client, and Sports Labs Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

* Not all tests carried out are within our scope of ISO 17025 accreditation.

This report is not an official National Governing Body report and does not imply NGB approval.

Declaration of Conformity

We confirm that the tests described in this report have been carried out in accordance with BS EN 14904: 2006 Surfaces for Sports Areas – Indoor Surfaces for Multi-Sports Use, and this report accurately reflects the outcome of the tests conducted.

Report Written By:	Claudio Lissoni	**Report Checked By:**	Gaston Cristini
Date:	03/03/2023	**Date:**	07/03/2023
Signed:		**Signed:**	

Test Laboratory

Test Laboratory Name:	Sports Labs Ltd
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Client

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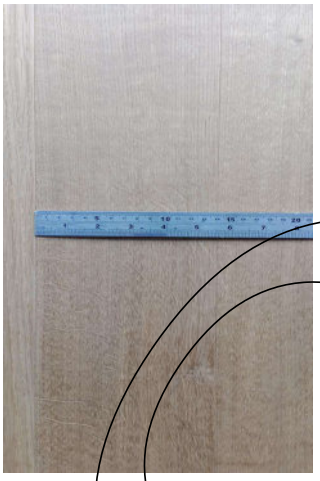
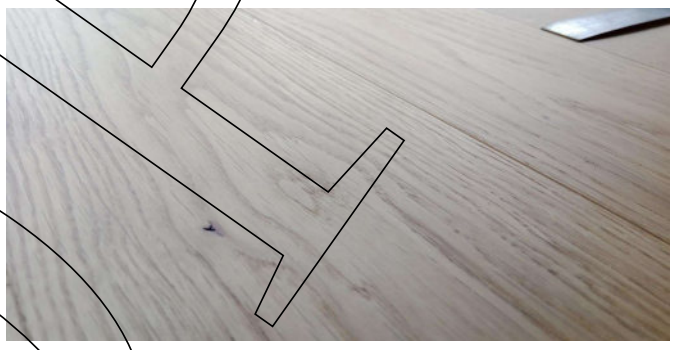
Product Description	
Product Name:	ECOFAST UV LED SPORT
Manufacturer:	CHIMIVER PANSERI S.P.A.
Product Type:	TOP FINISHING
Nominal Thickness:	N/A
Detailed Product Description:	N/A
Substrate:	Concrete

Surface Profile Image [Plan View]:	Surface Profile Image [End Elevation]:
	

Sample Reference			
Laboratory Job No.		61446	**Date Received**
Sample Reference No.	**Surface Sample 1**	1397	19/12/2022
	Surface Sample 2, if applicable	1397	19/12/2022
	Surface Sample 3, if applicable	-	-
Test Laboratories are required to store a reference sample of the tested product for a defined period. By checking the box opposite, we confirm that a 200x200mm sample has been placed in storage and will be retained as necessary.		☒ A sample of the tested product has been placed in storage and shall be retained as necessary.	

Performance Results Summary				
Property	**Test Method**	**Mean Result**	**Requirement**	**Pass/ Fail**
Ball Rebound	EN 12235: 2013	**N/A**	≥ 90% of rebound on concrete	**PASS**
Shock Absorption	EN 14808: 2005	**N/A** Choose an item.	25 % - 75 %	**PASS**
Vertical Deformation	EN 14809: 2005	**N/A** Choose an item.	≤ 5.0 mm	**PASS**
Friction	EN 13036-4: 2011	**85 PTV**	80 – 110 PTV	**PASS**
Resistance to Indentation	EN 1516: 1999 *	**N/A**	≤ 0.5 mm after 24 hours	**PASS**
Resistance to Impact	EN 1517: 2020 *	**N/A**	≤ 0.5 mm indentation	**PASS**
Resistance to Wear	EN ISO 5470-1: 1999 *	**36.7 mg**	Synthetic Surfaces ≤ 1000 mg per 1000 cycles	**PASS**
Resistance to Rolling Load	EN 1569: 2020 *	**N/A**	≤ 0.5 mm No Damage	**PASS**
Specular Gloss	EN ISO 2813: 2000 *	**5 GU**	Matt Surfaces ≤ 30 % Lacquered Surfaces ≤ 45 %	**PASS**

(* note: these tests are outwith our scope of ISO 17025 Accreditation)

(a) Relating to Combined Elastic Floors only - VDp is the vertical deformation of the point elastic component

Friction - Overview
The Pendulum Tester incorporates a spring-loaded slider made of a standard rubber mounted to the end of a pendulum arm. Upon releasing the pendulum arm from a horizontal position, the loss of energy as the slider assembly passes over the test surface is measured by the reduction in length of the upswing using a calibrated scale.

Friction – Requirements	
Test Method	**EN 13036-4: 2011**
Requirement	80 – 110 PTV
Uniformity	No individual result shall differ from the mean by more than ± 4 units. Swings 3 – 5 must remain constant.
Friction – Test Equipment	
SL Equipment Number	SL005, SL092, SL394, SL302, SL490, SL395
Uncertainty Value	(k=2.04) ± 3.22 PTV

Friction – Results	
Test Date:	25/01/2021
Technician:	GC
Air Temperature:	22.6
Surface Temperature:	20.1
Humidity:	52
Test Condition	**DRY – as supplied**
RESULTS	**Test 1**
Swing 1	85 - 84
Swing 2	86 - 84
Swing 3	87 - 83
Swing 4	87 - 83
Swing 5	88 - 82
Overall Mean Result	**85 PTV**
Requirement	80 – 110 PTV
Pass/Fail	**PASS**

Resistance to Wear - Overview
Six samples are tested for resistance to wear using taber abrasion apparatus fitted with specific abrasive wheels. The mass of the unworn sample is measured and then it is exposed to 1000 cycles of wear on the taber abrader, after which the mass is then re-measured, and any mass loss determined.

Resistance to Wear – Requirements	
Test Method	**EN ISO 5470-1: 1999 ***
Requirement	Synthetic Surfaces ≤ 1000 mg per 1000 cycles

Resistance to Wear – Test Equipment	
SL Equipment Number	SL Taber Abrader

Resistance to Wear – Results						
Test Date:	27/02/2023					
Technician:	JH					
Air Temperature:	21.7					
Surface Temperature:	21.2					
Humidity:	43					
Test Condition	**DRY – as supplied**					
RESULTS	**Test 1**	**Test 2**	**Test 3**	**Test 4**	**Test 5**	**Test 6**
Pre-Abrasion Mass (g)	56.2028	53.2536	53.9969	56.6207	52.6207	33.6273
Post-Abrasion Mass (g)	56.1797	53.2216	53.9641	56.8249	52.5733	33.5854
Mass Loss (g)	0.0231	0.032	0.0328	0.0428	0.0474	0.0419
Overall Mean Result	**0.036 g (36.7 mg)**					
Requirement	Synthetic Surfaces ≤ 1000 mg per 1000 cycles					
Pass/Fail	**PASS**					

(* note: this test is outwith our scope of ISO 17025 Accreditation)

Specular Gloss - Overview
The specular gloss of the product is determined using a reflectometer with geometry of 85°. Six readings are taken in different areas or directions on the sample, and a mean result is determined which is given below as the overall mean specular gloss result.

Specular Gloss – Requirements	
Test Method	**EN ISO 2813: 2000 ***
Requirement	Matt Surfaces ≤ 30 % Lacquered Surfaces ≤ 45 %

Specular Gloss – Test Equipment	
SL Equipment Number	SL Glossmeter

Specular Gloss – Results						
Test Date:	15/02/2023					
Technician:	CM					
Air Temperature:	21.5					
Surface Temperature:	21.0					
Humidity:	43					
Test Condition	**DRY – as supplied**					
RESULTS	**Test 1**	**Test 2**	**Test 3**	**Test 4**	**Test 5**	**Test 6**
	5	6.3	5	4.1	5.3	4.5
Overall Mean Result	**30 %**					
Requirement	Matt Surfaces ≤ 30 % Lacquered Surfaces ≤ 45 %					
Pass/Fail	**PASS**					

(* note: this test is outwith our scope of ISO 17025 Accreditation)

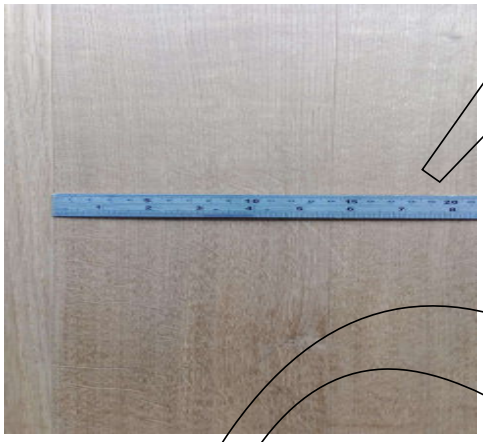
Conclusion

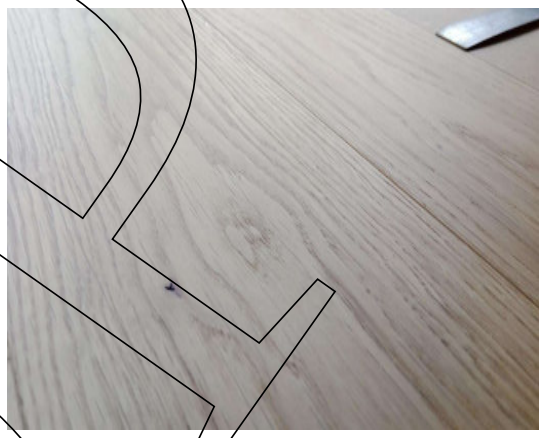
The product submitted was tested in accordance with SOME methods and requirements outlined in EN 14904: 2006. We confirm all information presented within this report is accurate and appropriately reflects the performance of the samples submitted. Based upon the test results we consider the product supplied to have:

☒ Met the requirements of EN 14904: 2006 for the parameters tested

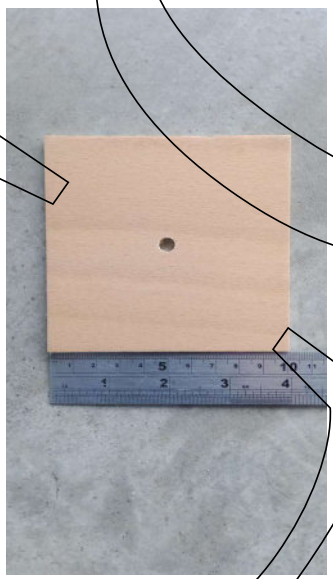
☐ Failed to meet some requirements of EN 14904: 2006 for the parameters tested

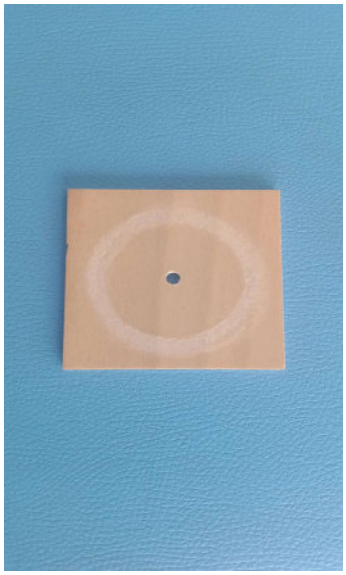
Sample Pictures





Sample Pictures - After Rolling Load





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