

LABORATORY PERFORMANCE REPORT

Exposure to Laboratory Light Sources – Part 3: Fluorescent Lamps (EN ISO 4892-3: 2016*) Cycle 6 Method C: Artificial Accelerated Weathering with UVB-313 Lamps

Report Number 12724/8090

Report Status Final

Issue Date 06/01/2023

FOREWORD

1. This report has been prepared by Sports Labs limited 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.
2. This report is confidential to the Client and Sports Labs Limited 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.
3. This report shall not be used for engineering or contractual purposes unless signed by the Author and the Checker and unless the report status is "Final".
4. *Not all tests carried out are within our scope of ISO 17025 Accreditation.
5. Comments and opinions are out with the scope of our ISO 17025 accreditation



HEADQUARTERS

Sports Labs Ltd.
1 Adam Square,
Brucefield Industry Park
Livingston EH54 9BE
Scotland, United Kingdom

Tel: +44 (0) 1506 444 755
Email: info@sportslabs.co.uk
Web: www.sportslabs.co.uk

REGIONAL LOCATIONS

- England
- Italy
- Morocco
- Netherlands
- Norway
- South Africa
- Turkey
- United States



UVB ISO 4892-3

Report No 12724/8090

Type	Monofilament
Colour	Dark Green

**Prepared
By** Craig Melrose
Laboratory Manager
06/01/2023

A handwritten signature in black ink, reading "C. Melrose", written over a horizontal dotted line.

**Checked
By** Sean Ramsay
Associate Director
06/01/2023

A handwritten signature in black ink, reading "S. Ramsay", written over a horizontal dotted line.



2 TESTING DETAILS

*EN ISO 4892-3: 2016	Methods of exposure to laboratory light sources – Part 3: Fluorescent Lights
* ISO 4582: 2017	Plastics — Determination of changes in colour and variations in properties after exposure to glass-filtered solar radiation, natural weathering or laboratory radiation sources
*BS EN 20105-A02: 1995	Greyscale for assessing change in colour

(*Not all tests carried out are within our scope of ISO 17025 Accreditation)

The results contained within this report are based on Sports Labs report number 12724/7160/3.

- Test specimens were selected at random from yarn spool supplied by client. Specimens are wound onto anodised exposure plates and placed vertically in the UV cabinet under the appropriate exposure conditions.
- QUV Basic exposure device with UVB-313 (type) 2 lamps.
- Irradiance $0.48 \text{ W.m}^{-2} \times \text{nm}^{-1}$ at 310 nm UV lamps off
- Black panel temperature $70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ / $50^{\circ}\text{C} \pm 3^{\circ}\text{C}$
- 8 h dry exposure, 4 h condensation cycle

3 TEST RESULTS

Unaged Sample Image





UVB ISO 4892-3

Report No 12724/8090

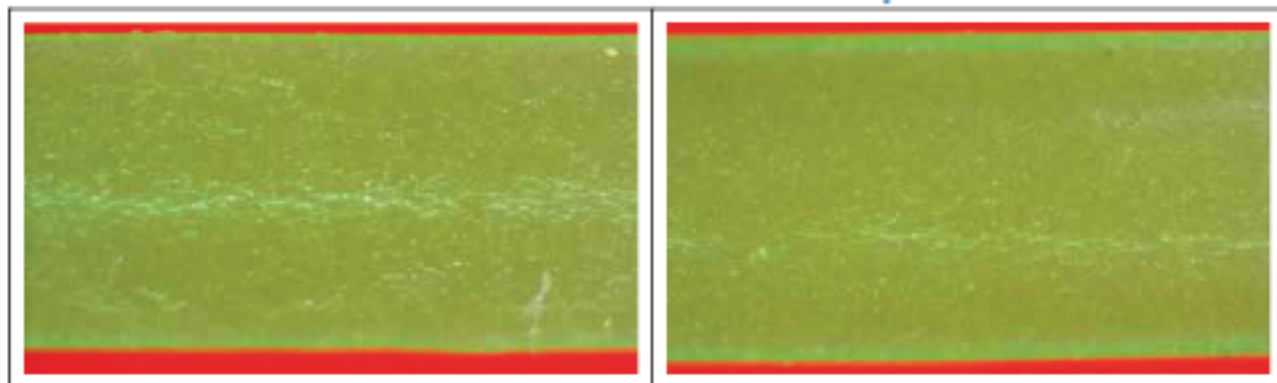
UVB ISO 4892-3 Cycle 6 * – 1000 hours exposure

Parameter	Unit	Test method	Result
			UVB aged
Change in Colour	—	EN 20105-A02 Grey-Scale	No change to colour hue, saturation and lightness. ISO 105-A02 grey scale 5

Yarn Pictures

Un-aged Yarn

UVB ISO 4892-3 Cycle 6 Aged Yarn
– 1000 hours exposure





UVB ISO 4892-3

Report No 12724/8090

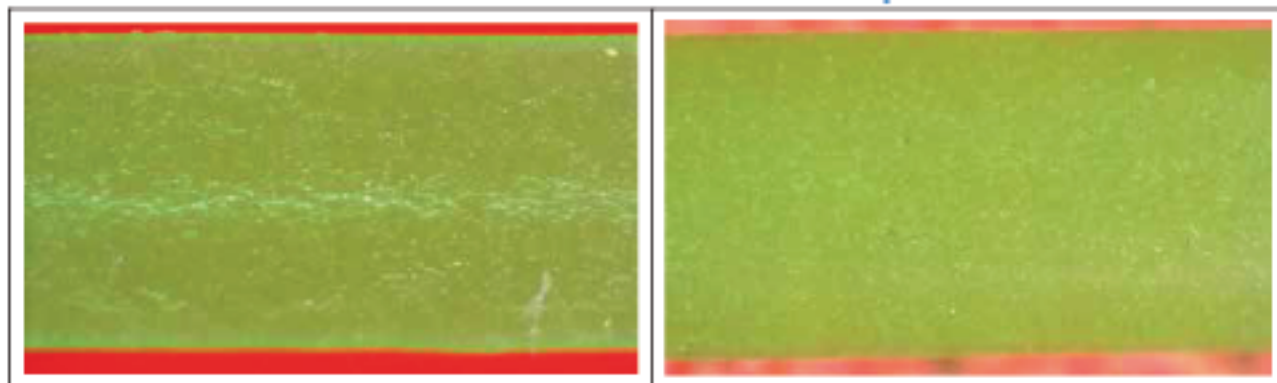
UVB ISO 4892-3 Cycle 6 * – 2000 hours exposure

Parameter	Unit	Test method	Result
			UVB aged
Change in Colour	—	EN 20105-A02 Grey-Scale	No change to colour hue, saturation and lightness. ISO 105-A02 grey scale 5

Yarn Pictures

Un-aged Yarn

UVB ISO 4892-3 Cycle 6 Aged Yarn
– 2000 hours exposure





UVB ISO 4892-3

Report No 12724/8090

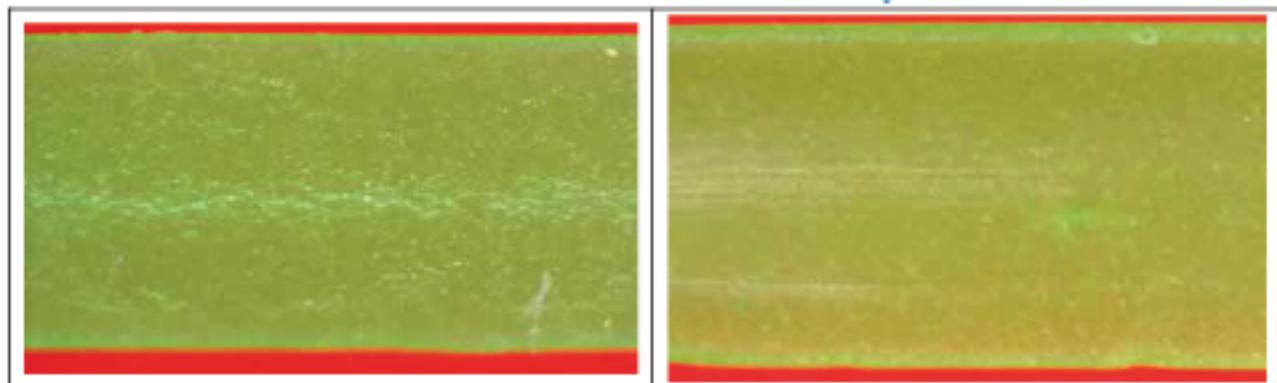
UVB ISO 4892-3 Cycle 6 * – 3000 hours exposure

Parameter	Unit	Test method	Result
			UVB aged
Change in Colour	—	EN 20105-A02 Grey-Scale	Minimal change to colour hue, saturation and lightness. ISO 105-A02 grey scale 4-5

Yarn Pictures

Un-aged Yarn

UVB ISO 4892-3 Cycle 6 Aged Yarn
– 3000 hours exposure



End of Report