



Our Ref: 13024/3146

Wednesday 14th July 2010

Tuff Turf N Co Pty Ltd
53 Shearson Crescent Mentone
Melbourne Victoria 3194

Sample Reference – Tuff Blade Dark

Dear Sir/Madam,

Please find the test results for the submitted yarn sample identified as 'Tuff Blade Dark' delivered to our laboratory on the 3rd February 2010.

Testing was carried out as described in the FQC Handbook of Test Methods for Football Turf 2009 using UVA lamps in conjunction with the following test methods:

BS EN 13864 2004: Surfaces of Sports Areas - Determination of Tensile Strength of Synthetic Yarns,
BS EN 14836 2005: Synthetic Surfaces for Outdoor Sports Areas - Exposure to Artificial weathering,
BS EN 20105-A02 1995: Greyscale for assessing change in colour

The yarn was tested for change in tensile strength in conjunction with UV and colour stability.

The test results are shown overleaf in tabular format.

Yours sincerely,

Sean Ramsay
Technical Manager



Sports Labs Ltd

Tel: +44 (0)845 602 6354
Fax: +44 (0)845 602 6356
Email: info@sportslabs.co.uk

Head Office:

12b Nasmyth Court
Houstoun Industrial Estate
Livingston
EH54 5EG

Regional Locations:

Durham
Birmingham
London



Table 1: Yarn UV Test Results

Yarn Reference	Test Condition	Test Results			
		Mean Force at break (N)	Elongation at break (%)	Linear Density (dTex)	Breaking tenacity (cN-TEX-1)
Tuff Blade Dark	Unaged	59.9	67.7	5084	11.79
	UVA	56.9	67.2	5083	11.19
	UVA % change Mean Force	5.3	Colour Change (greyscale)	4	
	UVA % change in Breaking Tenacity	5.1			

Table 2: Yarn Details

Yarn Reference	Colour	RAL No.	Thickness	Width	DSC
Tuff Blade Dark	Emerald green	120 40 30	140 Micron compact	1.5mm	121.84°C

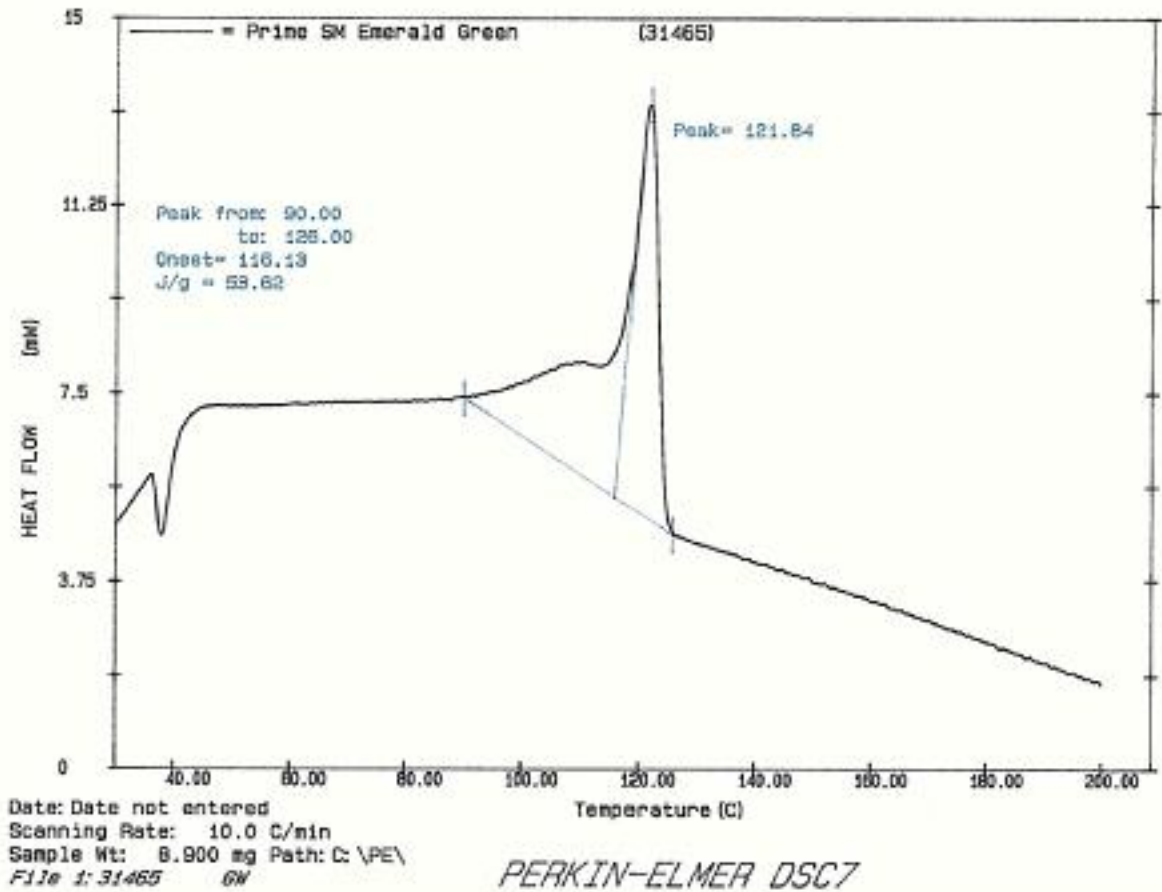


<p>Yarn Reference</p>	<p>Tuff Blade Dark</p>
<p>Yarn Profile</p>	
<p>Yarn Pre UVA exposure</p>	
<p>Yarn Post UVA exposure</p>	



DSC Graph

Tuff Blade Dark



Conclusion

The sample identified as 'Prime SM Emerald Green', when compared to the Fifa Quality Concept Handbook of Test Methods for Football 2009, meets the requirements for Tensile Strength and climatic colour resistance when exposed to artificial weathering by means of UVA lamps.

End of Report