

Technical Report

Assessment of
Edel Viagrass Pro 60
undertaken for
Edel Grass B.V.

Summary

The synthetic turf sports surface has been tested using the procedures described in the *Handbook of Test Methods for Football Turf* (2009 edition). This report details the sample tested and the results obtained. A formal FIFA laboratory test report has also been prepared and submitted to FIFA so they may determine if the product satisfies the laboratory test requirements of the FIFA Quality Concept; this is the first phase of field certification under the FIFA Quality Concept.

This report is not a formal FIFA laboratory report and does not confirm or imply FIFA type approval of the product. It may not be used for commercial purposes, unless it is reproduced in its entirety. The results are valid only for the complete system as described in this report.

1 Client

Edel Grass BV
Pr Beatrixstraat 3
Postbus 1
8281 CA Genemuiden
Holland

2. Product Description

Surface name		Edel Soccer ViaGrass Pro 60		
Artificial grass				
Carpet name / code		Edel Soccer ViaGrass Pro		
Pile height		60mm		
Infill				
Infill	Grade	Application rate	Supplier	
SBR	0.8 – 2.5mm	16kg/m ²	Genan	
Silica Sand	0.5 – 1.0mm	22.5kg/m ²	Filcom	
Carpet joints				
Type	Bonded			
Adhesive	Compothan Polymers	PUR 1400	Application rate	350g/lm
Backing film	Ceco B.V.			
Shockpad				
Name		No shockpad		
Composition				
Thickness				

3 Test Programme

The surface was tested using the test procedures described in the *Handbook of Test Methods for Football Turf* (2009 edition). The effects of simulated wear were measured after 20,200 cycles on a Lisport® machine. For the purposes of the test programme the artificial grass surface was laid on a concrete test bed.

4 Results

Property	Test condition	Units	Mean result
Vertical ball rebound	Dry	m	0.90
	Wet		0.92
	After simulated wear		0.94
Angle ball rebound	Dry	%	54
	Wet		74
Ball roll	Dry	m	7.3
	Wet		7.5
Shock absorption	Dry	%	63
	Wet		62
	After simulated wear		60
	-5°C		61
	40°C		64
Deformation	Dry	mm	7.0
	Wet		6.5
	After simulated wear		6.0

Property	Test Conditions	Units	Mean results
Rotational resistance	Dry	Nm	38
	Wet		41
	After simulated wear		41
Linear friction stud deceleration value	Dry	g	3.5
	Wet		4.1
Linear friction stud slide value	Dry	Stud slide value	170
	Wet		182
Skin / surface friction	Dry	μ	0.59
Skin abrasion	Dry	% change	14
Property	Aspect	Result	
Pile yarn (s)	Colour & RAL number	Dark Green 6010	Light Green 6025
	Colour change	4/5	4/5
	Yarn tensile strength	-21.55%	-21.5%
Polymeric infills	Colour	Black SBR	
	Colour change	5	
	Visual change	No change	
Property	Test condition	Units	Mean result
Joint strength	Unaged	N/100mm	72
	After water ageing		51
Water permeability of complete system	Unaged	mm/h	2582

Tensile strength of shock / e-layer	Unaged	MPa	-
Carpet tuft withdrawal	Unaged	N	52
	After water ageing		46

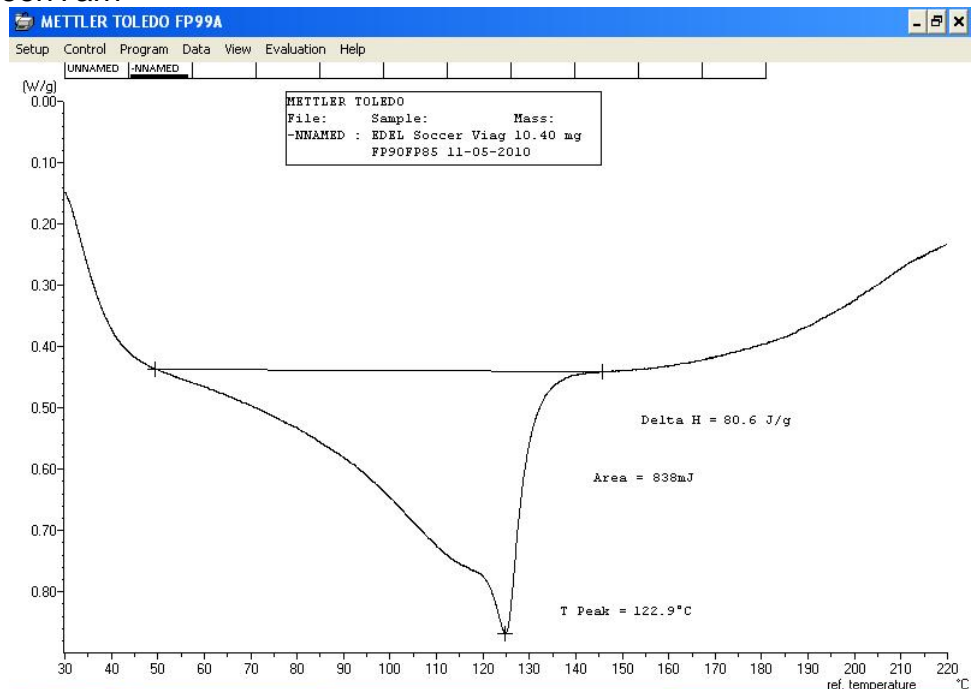
5 Product identification

Component	Property	Units	Mean result	
Artificial turf	Mass per unit area	g/m ²	2730	
	Tufts per unit area	/m ²	9982	
	Pile length (mm)	mm	Total length	Above backing
			124	60
	Pile weight	g/m ²	1544	
	Total pile dtex	dtex	12474	
	Water permeability of carpet	mm/hr	5581	
Shockpad or e-layer	Shock Absorption	%	N/A	
	Deformation	mm	N/A	
	Thickness	mm	N/A	

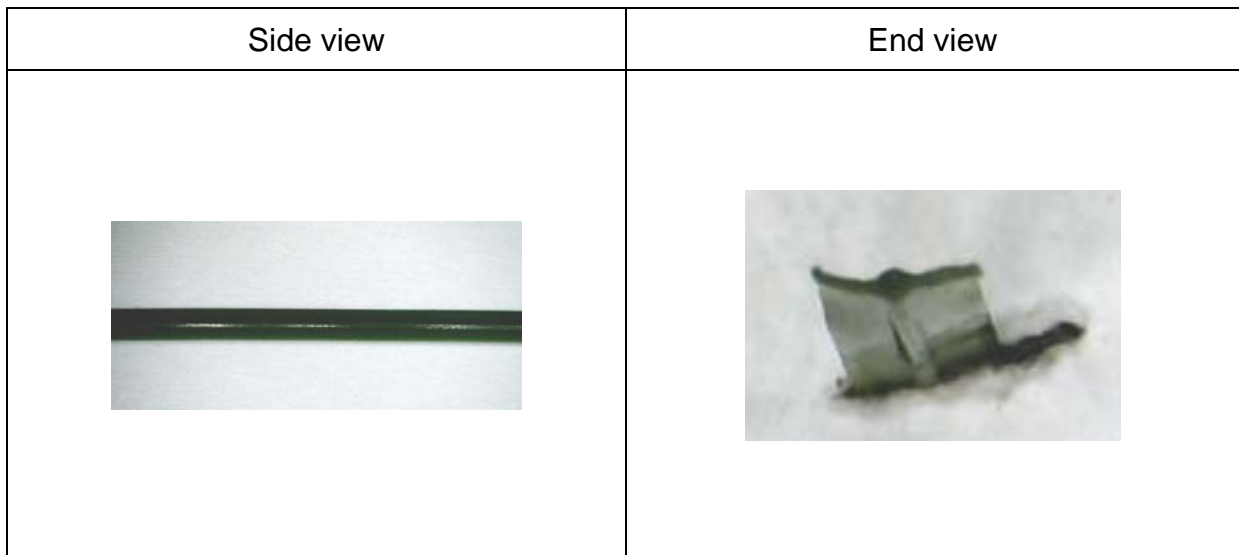
Pile yarn

Polymer characterisation

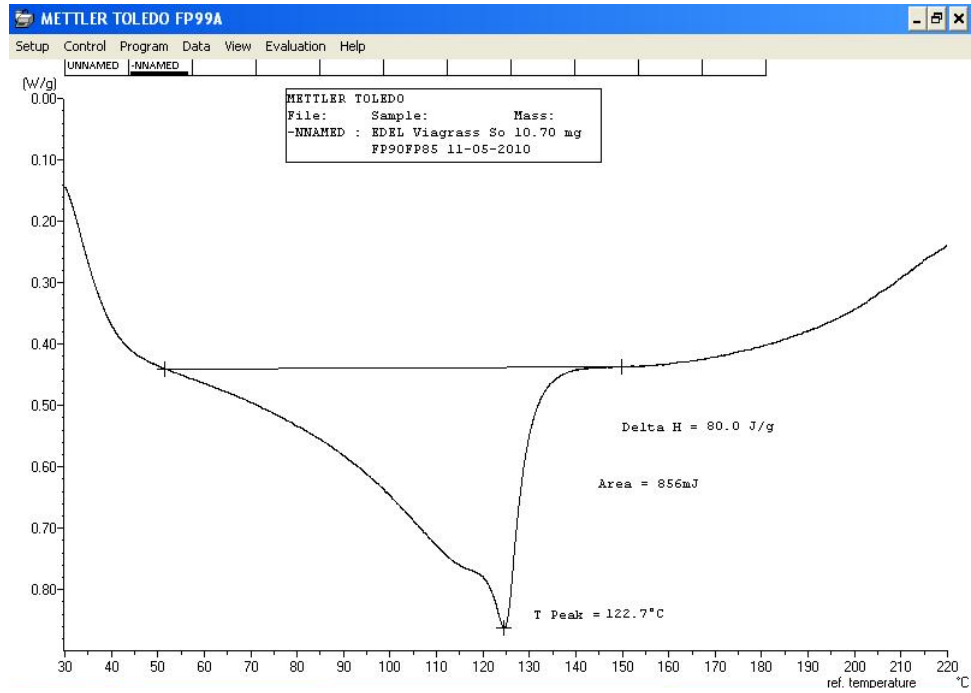
Dark Green Yarn



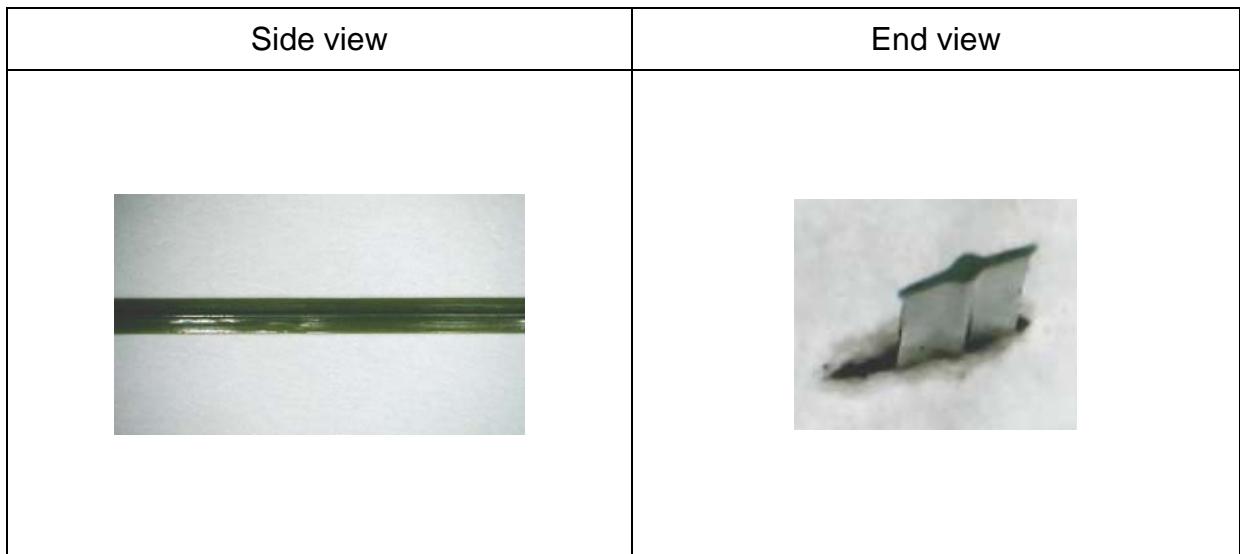
Pile profile



Light GreenYarn

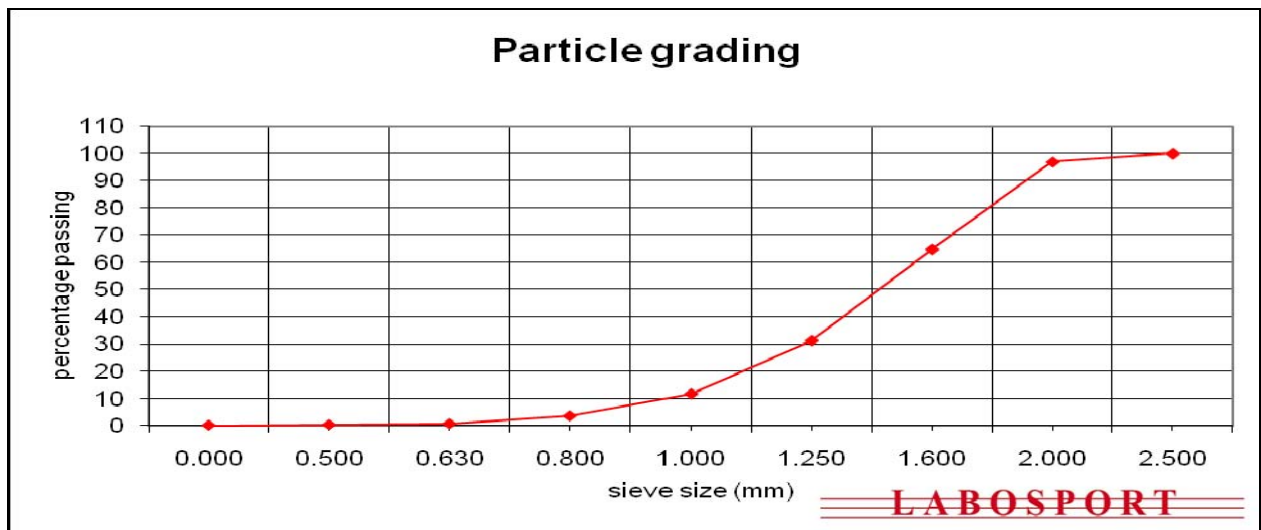


Pile profile



Performance infill

Particle grading



Sieve (mm)	0.000	0.200	0.315	0.500	1.000	1.250	1.600	2.000	2.500	3.350
% passing	0	0	0	3	12	31	65	97	100	100

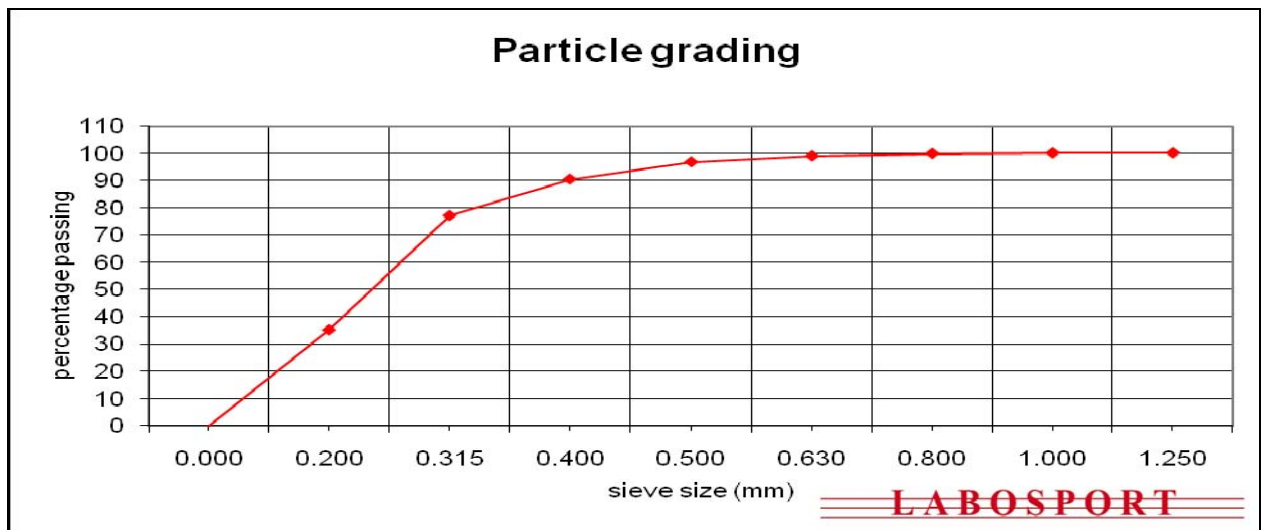
Particle shape



Bulk Density (g/cm³)	0.45			
Thermo-gravimetric analysis	% organic	65%	% inorganic	35%

Stabilising infill

Particle grading



Sieve (mm)	0.000	0.200	0.315	0.500	0.630	0.800	1.000	1.250
% passing	0	35	77	90	97	99	100	100







Particle shape





Bulk Density (g/cm³)	1.53
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Appendix A – Photographs showing visual effects of simulated wear

Number of Lisport cycles	20,200
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Before simulated wear	After simulated wear
General view	
	
Close-up of pile yarn	
	
Side view after brushing of pile	
	

Report details

Report prepared by	
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Report approved by	
Name and position	Alastair Cox - Director