

Laboratory Test Report – One Star Category



Information for applicants

The applicant should complete sections one, three and four of this report before sending it to their appointed FIFA accredited test laboratory together with the following samples:

- 11m x 1m of artificial turf and adequate infill materials (this surface should have no joints or inlaid lines)
- 2m x 1m of any shockpad or e-layer
- 5m length of pile yarn – if more than one yarn is used to form the pile please send one length of each
- 1m by 1m sample of artificial turf split down the middle and rejoined using the proposed jointing / seaming method

Information designated 'reference' in Section 3 will be used to verify samples submitted for laboratory test are in accordance with the manufacturer's declaration. It was also be used to verify samples installed on site are the same as those previously tested in the laboratory. **Where a test method is specified the property must be measured using it.**

On completion of the test programme the test laboratory will send the completed report directly to FIFA Marketing AG.

If the base on which the tests are to be made is to be constructed from unbound aggregate please supply adequate material and frame to construct a test bed measuring a minimum of 1m by 1m by the depth required to provide the dynamic response of the artificial turf system. If the test bed is to be constructed by test laboratory please also provide full installation instructions including details of compaction levels, etc.

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Section 1: Product and applicant details

Surface name				
Applicant				
Address				
Tel.				
Fax.				
Email				
Web				
Contact name				
Tel.				
Email				
Contact signature				
Surface product code (mandatory)				
Carpet name				
Performance infill				
Stabilising infill				
Shockpad or e-layer				
Base on which tests are to be made	Concrete	<input type="radio"/>	Unbound aggregate	<input type="radio"/>

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Section 2: Summary of results

Surface Name		Product code	
Performance infill		Stabilising infill	
Shockpad / e-layer		Base	
Property	Pass/fail	Property	Pass/fail
Ball/Surface interaction			
Vertical ball rebound		Vertical ball rebound after simulated wear	
Ball roll		Angle ball rebound	
Player/Surface interaction			
Shock absorbency		Shock absorbency after simulated wear	
Deformation		Deformation after simulated wear	
Rotational resistance		Stud slide value	
Stud deceleration value			
Effects of Artificial Weathering			
Pile yarn colour change		Pile yarn tensile strength	
Polymeric infill colour change			
Miscellaneous properties			
Unaged joint strength		Water aged joint strength	
Water permeability			
Overall assessment			
Passed		Failed	
Signature		Date	
Test Laboratory			
Laboratory reference			

Section 3: Reference information

Component	Property	Test Method	Specification	Property	Test Method	
Artificial turf	Carpet mass per unit area	ISO 8543		Total tufts per unit area	ISO 1763	
	Tuft withdrawal force	ISO 4919		Overall pile length	ISO 2549	
	Total pile weight	ISO 8543				
	Pile yarn characterisation	Yarn A		Yarn B		Yarn C
Performance infill	Particle size (range)	EN 933 - Part 1		Particle shape	prEN 14955	
	Bulk density	EN 13041		Material type		
Stabilising infill	Particle size (range)	EN 933 - Part 1		Particle shape	prEN 14955	
	Bulk density	EN 13041		Material type		
Shockpad	Thickness	EN 1969		Shock absorption	EN 14808	

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Section 4: Product description

Artificial Turf			
Manufacturer			
Tuft pattern			
Pile yarn	Yarn A	Yarn B	Yarn C
Manufacturer			
Product name / code			
Pile length	mm	mm	mm
Pile weight	g/m ²	g/m ²	g/m ²
Pile detex			
Pile width	mm	mm	mm
No of tufts / m ²			
Pile thickness	micron	micron	micron
Pile colour (RAL no)			
Primary turf backing			
Manufacturer			
Product name / code			
Type of product			
Polymer composition			
Reinforcement scrim			
Manufacturer			
Product name / code			
Type of product			
Secondary backing (coating)			
Manufacturer			
Product name / code			
Type of product			
Application rate	g/m ²		
Carpet joints			
Stitched seams			
Tread or Velcro manufacturer / brand name / product code			
Bonded seams			
Adhesive manufacturer / brand name			
Adhesive application rate	g/m		

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Backing film manufacturer / brand name / product code			
Performance infill			
Manufacturer / supplier			
Product name / code			
Material			
Application rate / depth		kg/m ²	mm
Stabilising infill			
Manufacturer / supplier			
Product name / code			
Material			
Application rate / depth		kg/m ²	mm
Shockpad / e-layer (when supplied as part of system)			
Manufacturer			
Product name / code			
Composition (type, rubber granule grading, binder content, etc)			
Nominal mass per unit area	kg/m ²		



Section 5: Detailed laboratory tests results

Property	Specified range	Test condition	Mean result	Pass / fail
Vertical ball rebound	0.6 m – 1.0 m	Dry		
		After simulated wear		
Angle ball rebound	45 % - 70 %	Dry		
Ball roll	4 m – 10 m	Dry		
Shock absorption	55 % - 70 %	Dry		
		After simulated wear		
Deformation	4 mm – 9 mm	Dry		
		After simulated wear		
Rotational resistance	25 Nm – 50 Nm	Dry		
		After simulated wear		
Linear friction Stud deceleration value	3.0 g – 6.0 g	Dry		
Linear friction Stud slide value	120 – 220	Dry		
Effects of artificial weathering				
Property	Aspect	Requirement	Result	Pass / fail
Pile yarn (s)	Colour change	\geq Grey scale 3		
	Yarn tensile strength	% change \leq 50%		
Polymeric infills	Colour change	\geq Grey scale 3		
	Visual change in composition	No change		
Miscellaneous				
Property	Requirement	Condition	Result	Pass / fail
Joint strength	Stitched joints	\geq 1000 N/100mm	Unaged	
			Water aged	

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Property		Requirement	Condition	Result	Pass / fail	
Joint strength	Bonded joints	≥ 25 N/100mm	Unaged			
			Water aged			
Water permeability		>180 mm/h	N/A			
Product identification (no requirements)						
Artificial turf and pile yarn(s)	Mass per unit area					
	Tufts per unit area					
	Tuft withdrawal force					
	Pile length					
	Pile weight					
	Pile yarn characterisation (attach DSC graph to test report)					
Infill layer depth(s)	Layer 1		Layer 2		Layer 3	
Performance infill	Particle size range (attach particle size grading to test report)					
	Particle shape					
	Bulk density					
	Thermo-gravimetric analysis	% organic				
		% inorganic				
	Residual compression & change in appearance					
Stabilising infill	Particle size range (attach particle size grading to test report)					
	Particle shape					
	Bulk density					

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Shockpad or e-layer (if supplied as part of system)	Shock Absorption	
	Thickness	
Unbound sub-bases (if tested as part of system)	Composition	
	Particle size range (attach particle size grading to test report)	
	Particle shape	
	Thickness	

Section 6: laboratory tests for data collection

Property	Test condition	Mean result
Shock absorption – studded foot	Dry	
Deformation – studded foot	Dry	