

Performance Requirements for Netball Surfaces

Property	Method of Test	Preferred Requirement	Basic Requirement
SLIP RESISTANCE	ITF CS 02/01; 1997	Outdoor surfaces Minimum: 75 Maximum: 100 Variation: <10% Indoor surfaces Minimum: 100 Maximum: 120 Variation: <10%	Outdoor surfaces Minimum: 75 Variation: <10% Indoor surfaces Minimum: 90 Variation: <10%
TRACTION	ITF CS 03/01; 1997	Outdoor surfaces Minimum: 0.9 Maximum: 1.50 Indoor surfaces Minimum: 1.20 Maximum: 1.80	Outdoor surfaces Minimum: 0.7 Indoor surfaces Minimum: 1.0
BALL REBOUND	prEN 12235 using a <i>Gilbert Grip Sure</i> Number 5 Netball inflated to a normal pressure of 1 bar, and having a bounce on concrete of $1.36 \pm 0.05\text{m}$ when dropped from a height of 2.00m.	Maximum: 95%	Minimum: 90%
FORCE REDUCTION	ITF CS 04/01; 1997	Outdoor surfaces Minimum: 10% Maximum: 30% Indoor use Area elastic floors Minimum: 35% Maximum: 50% Point elastic floors Minimum: 10% Maximum: 25%	Outdoor surfaces No requirement Indoor use No requirement

MODIFIED VERTICAL DEFORMATION	<p>Clause 1.5 in the Appendix of the IAAF Track and Field Manual; 1995</p> <p>If the modified vertical deformation value is greater than 0.5mm, the surface shall be tested a further eight times (on the same location) and the mean values of the second to fourth tests and the tenth to twelfth tests calculated.</p>	<p>Maximum Deformation: 1.0mm</p> <p>For surfaces that give a maximum deformation after the initial series of tests of more than 0.5mm, the maximum deformation after the final series of tests shall not increase by more than 0.25mm from the initial value, nor exceed 1.0mm.</p>	<p>Maximum Deformation: 2.0mm</p> <p>For surfaces that give a maximum deformation after the initial series of tests of more than 0.5mm, the maximum deformation after the final series of test shall not increase by more than 0.25mm from the initial value, nor exceed 2.0mm.</p>
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Property	Method of Test	Preferred Requirement	Basic Requirement
MODIFIED VERTICAL DEFORMATION (CONTINUED)	For area elastic surfaces the tests shall be carried out on the upper point elastic portion of the surface		
PERMEABILITY	ITF CS 06/01; 1997	<p>Surfaces intended to be permeable shall be designed and constructed so that no water is present on the surface fifteen minutes after rainfall ceases.</p> <p>The permeability rate at the time of construction shall exceed 100mm/hr.</p>	Surfaces intended to be permeable shall be designed and constructed so that no water is present on the surface fifteen minutes after rainfall ceases.
SURFACE REGULARITY	ITF CS 08/01; 1997	<p>Maximum undulation under a 3m straight-edge: 6mm</p> <p>Maximum undulation under a 300mm straight-edge: 2mm</p>	<p>Maximum undulation under a 3m straight-edge: 8mm</p> <p>Maximum undulation under a 300mm straight-edge: 2mm</p>
GRADIENTS	Optical or laser level	<p>Permeable surfaces shall be laid in a single plane with a maximum gradient of 1:120 (0.83%)</p> <p>Non-permeable surfaces shall be laid in a single plane with a maximum gradient of between 1:120 (0.83%) and 1:100 (1.0%)</p>	Surfaces shall be laid in a single plane with a maximum gradient of 1:100 (1.0%)

1. The surfacing, including line markings, should meet the appropriate requirements in all environmental or climatic conditions in which it may be reasonably be expected to be used. Unless otherwise stated by the manufacturer, outdoor surfacing should comply under dry and damp/wet conditions.
2. Some forms of dense synthetic turfs and textile surfaces incorporate particulate fill materials within their pile. This material is normally stabilised by the pile and retained within the surface giving suitable performance. In certain circumstances, however, the action of playing netball or the lack of maintenance can cause the fill material to rise to

the surface. Irrespective of the performance characteristics of synthetic turfs and textile surfaces, the presence of unstabilised particulate material on the top of a surface is not considered to be acceptable.

