

## Technical Report

Assessment of

BSS – 1000 synthetic athletics surfacing

in accordance with EN 14877

for

Beynon Sports Surfaces, Inc

### **Summary**

BSS-1000 synthetic athletics surfacing has been assessed in accordance with EN 14877: 2007: *Synthetic Surfaces for Outdoor Sports Areas – Specification*. This report describes the surface tested; lists the tests undertaken; details the results obtained and compares the results to the requirements of the European Standard.

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## 1 Client

Beynon Sports Surfaces, Inc  
16 Alt Road  
Hunt Valley  
MD 21030  
USA

## 2 Sample details

Surface name	BSS-1000
Manufacturer's description	Force reduction layer consisting of 2-C PU intermixed with finely ground SBR rubber (~9mm)  Wear course consisting of a 2-C PU matrix in which EPDM 1-3mm rubber is broadcasted in a thickness of (~4mm)

## 3 Test Programme

The surface was tested in accordance with EN 14877 (2007): *Synthetic Surfaces for Outdoor Sports Areas –Specification* as a surface designed for athletics.

For the purposes of the test programme the synthetic surface was laid on a concrete test bed.

The tests were undertaken during the period April – September 2008.

## 4 Results

The results of the test programme are tabulated in Appendix A of this report.

## 5 Conclusions

BSS-1000 has been found to comply with the laboratory test requirements of EN 14877 (2007): *Synthetic Surfaces for Outdoor Sports Areas –Specification* as a surface designed for athletics.

The shock absorptions result on the unaged sample placed the surface into category SA 25 to 34. After artificial weathering the result also placed the surface into category SA 25 to SA 34.

### Reported by:



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Alastair L Cox  
Director



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James R Blackburn  
Consulting Technician

## Appendix A – results

Property	Condition	Result / class	Requirement	Pass/fail
Thickness	-	13.6mm	$\geq 10\text{mm}$	Pass
Friction	Dry	108	55 -110	Pass
	Wet	65		Pass
Shock absorption	10°C	28%	25% - 60%	Pass
	23°C	32%		
	40°C	32%		
	after artificial weathering	34%		
Deformation	10°C	1.2mm	$\leq 3\text{mm}$	Pass
	23°C	1.3mm		Pass
	40°C	1.7mm		Pass
Water permeability	-	N/A	-	-
Resistance to wear	unaged	3.455g	$\leq 4.0\text{g}$	Pass
	after artificial weathering	3.934g		Pass

Property		Condition	Result		Requirement		Pass/fail	
Tensile Properties	Tensile strength	unaged	0.51 Mpa		$\geq 0.4\text{Mpa}$		Pass	
		after artificial weathering	0.55 Mpa				Pass	
	Elongation at break	unaged	65%		$\geq 40\%$		Pass	
		after artificial weathering	55%				Pass	
			Result	% variation	Result	% variation		
Spike resistance	Tensile strength	unaged	0.58 Mpa	+14%	$\geq 0.4\text{Mpa}$		$\leq 20\%$	Pass
		after artificial weathering	0.53 Mpa	-4%			Pass	
	Elongation at break	unaged	62%	-5%	40%		$\leq 20\%$	Pass
		after artificial weathering	49%	-11%			Pass	
Colour change		after artificial weathering	4		$\geq 3$		Pass	