

**OF THE FIELD** 



# BASEBALLIS AN ANERGAN TRADITIO THAT HAS STOOD THE TEST OF TIME.

Thanks to Shaw Sports Turf's revolutionary synthetic turf system designed to the specific needs of baseball, the game surface is evolving. Artificial isn't a forgotten option anymore. **B1K: Batting A Thousand** ushers in a new generation of turf and along with it the next level of playability. Now really, let's play ball.

For this purist game, the approach is different than other sports. Each area of the field is meant to have different playability characteristics. At Shaw Sports Turf we have dedicated ourselves to researching high-end fields and how athletes perform on them to develop artificial turf systems that play true in all areas of the field.

#### LEADING THE LINEUP

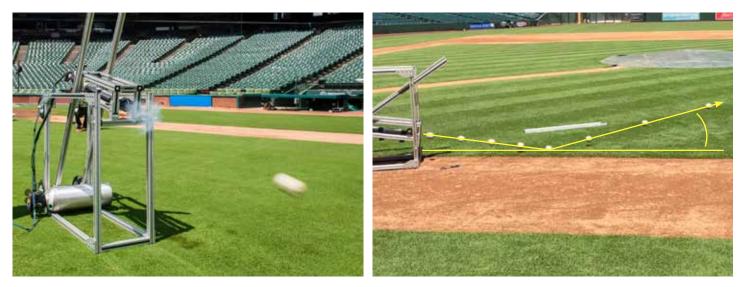
ORDER	#	PLAYER	POSITION
1	Sha	aw Sports Turf is the <b>ONLY</b> compan	

in the synthetic turf industry with over 5 years of research and collecting data specific to our baseball systems. Focusing on athlete, surface, and game science, we design fields that not only play like natural, but play like the surface the game should be played on. RESEARCH

### **SURFACE PERFORMANCE**

Comparing both natural grass and synthetic turf field characteristics, Shaw Sports Turf set out to develop a method with baseball organizations and academic partners to evaluate a baseball fields' playability. Using a specially designed cannon to replicate ball speeds and angles off the bat and off the surface, different types of data such as ball roll, pace and bounce were collected using high speed cameras along with other surface testing equipment.

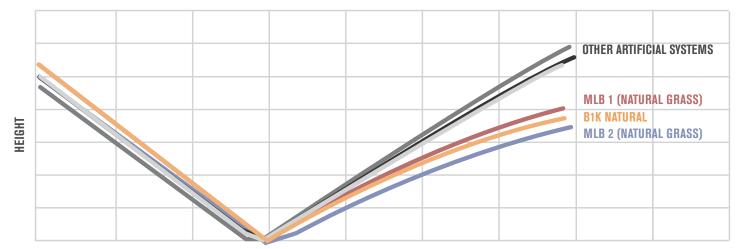
Compiling this data on a multitude of different fields, both collegiate and professional, set up an ideal playing surface benchmark for designing our systems.



SHAW SPORTS TURF'S SIGNATURE BASEBALL CANNON LEADS THE WAY AS AN INNOVATIVE BENCHMARKING TECHNIQUE. WE TEST FIELDS WITH OPTIMAL PLAYABILITY TO RAISE THE BAR FOR OUR NEW GENERATION OF BASEBALL TURF, B1K.

#### **BASEBALL BOUNCE DIFFERENCE**

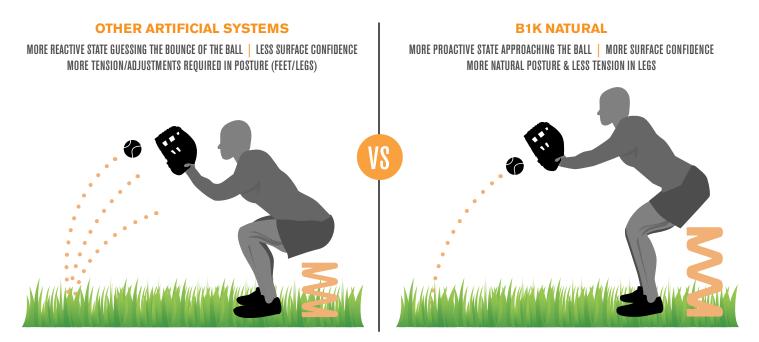
between natural & artificial system options



**SPEED / DISTANCE** 

ATHLETE PERFORMANCE

Playability isn't just about the surface alone; it's also about an athlete's interactions with it while performing the movements required by sport. Working with our university research partners, we were able to study those very movements in detail. Attaching sensors to record and analyze athletes on several different surface types, multiple synthetic systems as well as natural, revealed how the body reacts to each of them. For the benefit of the player, the surface should provide less energy rebound and less leg stiffness.



PLAYING ON A SURFACE TAILORED FOR BASEBALL PROMOTES MORE NATURAL PLAY. A MORE CONSISTENT BALL BOUNCE ALLOWS PLAYERS TO FIELD HITS MORE NATURALLY WHILE A FIRMER SURFACE MINIMIZES FATIGUE AND SORENESS.

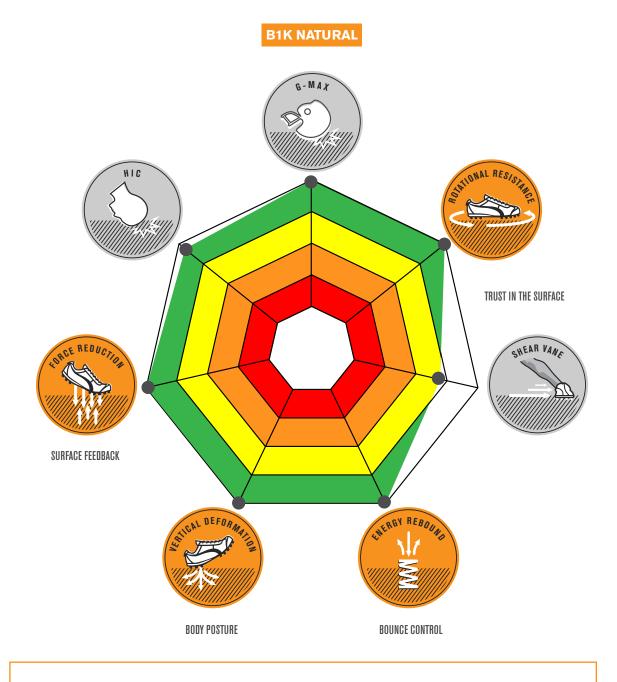
### RESEARCH 3 KEY FACTOR: ENERGY REBOUND

The key component found was energy rebound, or the amount of energy return from the surface upon impact, is a factor in performance. Not only does it affect the angles and trajectory of the ball based on surface type, the amount of energy rebound factors into an athlete's confidence of step. The quicker and easier it is for the body to find a balance, the better the athlete performs.



### RESEARCH 4 PLAYABILITY ASSESSMENT

Shaw Sports Turf's Playability Tool is a visual representation of data collected through a battery of standard tests that score a field based on how it measures on each. Research shows that what's important to one sport's performance, may not be as important to another. In the graph seen here, the better the field tests in the orange highlighted criteria, the better it is for baseball.



### TAKING THE RESULTS FOUND FROM ALL OF THIS DATA, B1K WAS CREATED AS A COMPREHENSIVE BASEBALL SOLUTION DESIGNED FOR HIGH-END PERFORMANCE.

# B1K: A PRODUCT OF THE RESEARCH RESULTS

#### WARNING TRACK

TRUTRACK a solution that can be heard & felt when approaching the wall

#### OUTFIELD

TAG UP a hybrid product with a natural, well-manicured aesthetic

#### SKINS

SIX4THREE using a sturdy fiber construction for added

durability around the bases, a product that mimics the characteristics of clay

#### INFIELD

TAG UP a hybrid synthetic product with a natural, well-manicured aesthetic MOUND FULL COUNT a sturdy synthetic mound option to handle pitch after pitch

PRODUCT	warning track TRUTRACK	CLAY/PLATE SIX4THREE	MOUND FULL COUNT	INFIELD (GRASS) TAG UP	OUTFIELD (GRASS) TAG UP
B1K NATURAL					
INFILL	NATURAL	NATURAL	NATURAL	NATURAL	NATURAL
PAD REQUIRED	YES	YES	YES	YES	YES
<b>B1K DOUBLE PLAY</b>					
INFILL	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
PAD REQUIRED	YES	YES	YES	YES	YES
B1K					
INFILL	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
PAD REQUIRED	NO	NO	NO	NO	NO

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### // **B1K:** SIX4THREE



TEST	UNIT	SPECIFICATIONS
Linear Density - Denier Tape*	Denier	8,000
Linear Density - Denier Thatch*	Denier	4,400
Thickness	Microns	100
Break Strength**	lbs/force	20
Elongation	%	> 30
Total Lead Content	ppm	< 100
Total Product Weight***	oz⁄yd²	81
Pile Yarn Fiber Weight****	oz⁄yd²	53
Primary Backing Weight****	oz⁄yd²	≥8
Secondary Backing Weight <sup>+</sup>	oz⁄yd²	20
Average Pile Height****	inches	1.625
Average Tuft Bind Strength	lb / force	>10
Tufting Gauge	inches	1/4
Average Grab Tear Strength	lb / force	> 200
Pill Flammability		Pass
Infiltrometer (Drainage)	in / hr	> 25

 $\begin{array}{l} \mbox{Except where noted as a minimum or maximum, the above specifications are nominal.} \\ * All values are \pm 8\% \quad ** \mbox{All values are } \pm 25\% \quad *** \mbox{All values are } \pm 10\% \quad **** \mbox{All values are } \pm 5\% \quad \dagger \mbox{All values are } \pm 3 \mbox{ oz} \\ \end{array}$ 



## // B1K: FULL COUNT



TEST	UNIT	SPECIFICATIONS
Linear Density - Denier*	Denier	8,000
Thickness	Microns	100
Break Strength**	lbs/force	20
Elongation	%	> 30
Total Lead Content	ppm	< 100
Total Product Weight***	oz⁄yd²	79
Pile Yarn Fiber Weight****	oz⁄yd²	51
Primary Backing Weight****	oz⁄yd²	≥8
Secondary Backing Weight <sup>+</sup>	oz⁄yd²	20
Average Pile Height****	inches	1.75
Average Tuft Bind Strength	lb/force	>10
Tufting Gauge	inches	1/4
Average Grab Tear Strength	lb / force	> 200
Pill Flammability		Pass
Infiltrometer (Drainage)	in / hr	> 25

Except where noted as a minimum or maximum, the above specifications are nominal.

\* All values are ± 8% \*\* All values are ± 25% \*\*\* All values are ± 10% \*\*\*\* All values are ± 5% † All values are ± 3 oz



## // **B1K:** TRUTRACK



TEST	UNIT	SPECIFICATIONS
Linear Density - Denier*	Denier	8,000
Thickness	Microns	100
Break Strength**	lbs/force	20
Elongation	%	> 30
Total Lead Content	ppm	< 100
Total Product Weight***	oz⁄yd²	45
Pile Yarn Fiber Weight****	oz⁄yd²	17
Primary Backing Weight****	oz⁄yd²	≥8
Secondary Backing Weight <sup>+</sup>	oz⁄yd²	20
Average Pile Height****	inches	1.625
Average Tuft Bind Strength	lb / force	>10
Tufting Gauge	inches	1/2
Average Grab Tear Strength	lb / force	> 200
Pill Flammability		Pass
Infiltrometer (Drainage)	in / hr	> 25

Except where noted as a minimum or maximum, the above specifications are nominal.

\* All values are ± 8% \*\* All values are ± 25% \*\*\* All values are ± 10% \*\*\*\* All values are ± 5% † All values are ± 3 oz



## // TAG UP 2.0



TEST	UNIT	SPECIFICATIONS
Linear Density - Denier Mono*	Denier	10,800
Linear Density - Denier Tape*	Denier	5,000
Thickness - Mono**	Microns	300
Thickness - Tape**	Microns	100
Break Strength - Mono***	lbs/force	20
Break Strength - Tape***	lbs/force	12
Elongation - Mono & Tape	%	> 30
Total Lead Content - Mono & Tape	ppm	< 100
Total Product Weight****	oz∕yd²	74
Pile Yarn Fiber Weight**	oz∕yd²	46
Primary Backing Weight**	oz∕yd²	8
Secondary Backing Weight <sup>+</sup>	oz∕yd²	20
Average Pile Height**	inches	2.0
Average Tuft Bind Strength	lb / force	>10
Tufting Gauge	inches	1/2
Average Grab Tear Strength	lb / force	> 200
g-Max		< 200
Pill Flammability		Pass
Infiltrometer (Drainage)	in / hr	> 25



# // TAG UP 1.75



TEST	UNIT	SPECIFICATIONS
Linear Density - Denier Mono*	Denier	10,800
Linear Density - Denier Tape*	Denier	5,000
Thickness - Mono**	Microns	300
Thickness - Tape**	Microns	100
Break Strength - Mono***	lbs/force	20
Break Strength - Tape***	lbs/force	12
Elongation - Mono & Tape	%	> 30
Total Lead Content - Mono & Tape	ppm	< 100
Total Product Weight****	oz∕yd²	68
Pile Yarn Fiber Weight**	oz∕yd²	40
Primary Backing Weight**	oz∕yd²	8
Secondary Backing Weight <sup>+</sup>	oz∕yd²	20
Average Pile Height**	inches	1.75
Average Tuft Bind Strength	lb / force	>10
Tufting Gauge	inches	1/2
Average Grab Tear Strength	lb / force	> 200
g-Max		< 200
Pill Flammability		Pass
Infiltrometer (Drainage)	in / hr	> 25

