



# Is it Magic? No. It's Science.

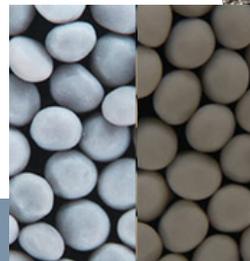
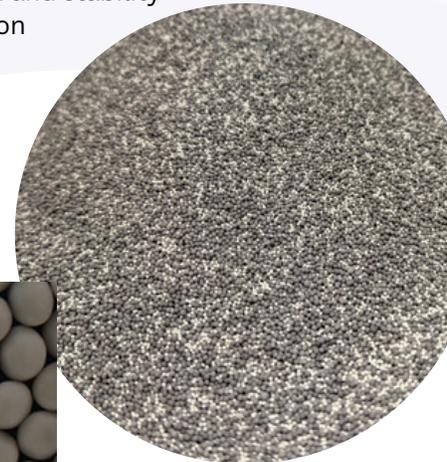
## Natural Ceramic Beads Blended for Ultimate Temperature Control

- **Patent pending** formula for sustained lower surface temperatures of artificial turf
- Chemically inert, non-hazardous and produces no respirable silica dust
- Products meet AWWA B100 specifications
- Top coat or mixed with existing synthetic infills
- Enhances blade protection and stability
- Water filtration & absorption
- High thermal conductivity
- Enhanced heat capacity

## THE TRIFECTA OF COOLING

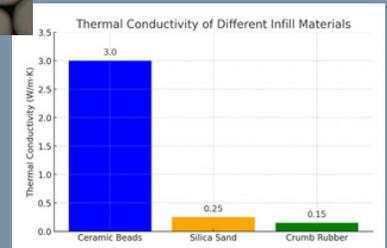
### Understanding the Science Behind TCR

*TCR Infill* is a blend of both porous and nonporous natural ceramic beads which can be used as an additive to existing infills, engineered to reduce surface temperatures.



### 1. Thermal Conductivity

Think of our TCR Ceramic Beads as little “heat sponges” soaking up heat from the surrounding infill and blades. That’s called *thermal conductivity*, meaning they rapidly transfer heat away from other materials and disperse it more evenly. This prevents heat buildup and keeps the turf cooler underfoot.



### 2. Heat Capacity

TCR Ceramic beads also have high *heat capacity* that absorb and store heat without dramatic temperature spikes. TCR is engineered to absorb heat during the hottest parts of the day and release it slowly, preventing extreme temperature fluctuations.



### 3. Evaporative Cooling

TCR includes a blend of porous and non-porous ceramic beads. These beads temporarily absorb and store water, releasing it gradually as it evaporates, creating a natural cooling effect similar to how sweat cools the human body.





TESTING TECHNOLOGY FOR SPORT

Test Laboratory	
Test Laboratory Name:	Sports Labs
Address:	50 Business Depot Drive
City & ZIP Code:	Ringgold 30736
State or Province:	Georgia
Country:	United States of America
Telephone:	+1 (706) 406-2070
Email:	kieran@sportslabs.com

**Test Method:**

- FIFA 14: Procedure for the determination of heat on artificial turf products

**3D3 2" 52 oz 18"x18" Dry and Wet Samples were Tested:**

- 2.0 lbs. SBR & 4.0 lbs. Sand
- 0.5 lb. TCR, 0.5 lb. TCR Hydra, 1.8 lbs. Sand & 1.8 lbs. SBR

Note: The wet sample was treated with 8 oz/ft<sup>2</sup> using a pump sprayer.

Heat Test Dry			Heat Test Wet	
3D3 2" 52oz. 18" x 18" Sample			3D3 2" 52oz. 8 oz/ft <sup>2</sup> of water on a 18" x 18" Sample	
Elapsed Time [min]	2 lbs. SBR /4 lbs. Sand [°F] <i>Control Sample</i>	0.5 lb. TCR /0.5 lb. TCR Hydra/ 1.8 lbs. Sand/ 1.8 lbs. SBR [°F]	2 lbs. SBR /4 lbs. Sand [°F] <i>Control Sample</i>	0.5lb TCR /0.5 lb. TCR Hydra/ 1.8 lbs. Sand/ 1.8 lbs. SBR [°F]
0	90	76	78	72
5	108	91	98	81
10	116	99	105	86
15	120	104	109	87
20	124	109	111	92
30	128	114	113	95
40	131	118	115	97
50	133	121	116	98
60	135	123	117	98
75	136	126	117	99
90	138	127	125	99
105	139	128	129	101
120	140	128	131	103
135	141	129	132	104
150	141	129	133	106
165	142	130	133	107
180	142	130	134	109
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