

# THE SCIENCE BEHIND THE SURFACE

**shaw**  
SPORTS TURF

## WHAT IS GEOFILL?

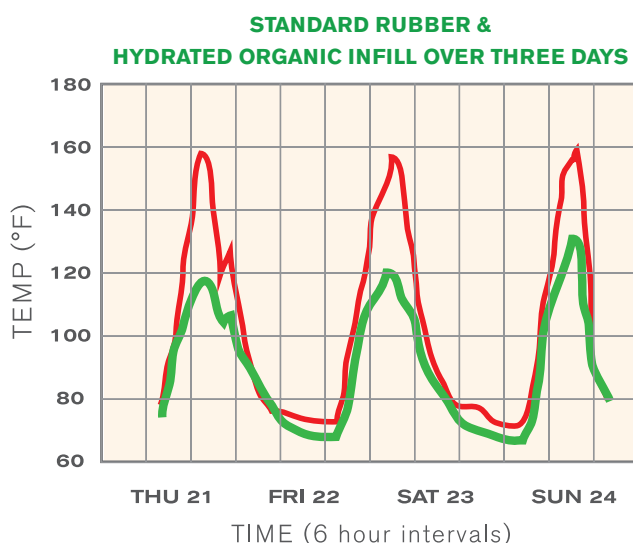
Geofill is an organic material primarily composed of coconut husks and fibers. This completely natural material is the leading alternative infill in the synthetic turf market. Coconut fibers are 100% organic and are a rapidly renewable resource. They also have excellent water retention qualities, this helps keep surfaces cooler. The presence of water in Geofill has been shown to keep synthetic turf fields up to 40 degrees cooler.

## HOW DOES GEOFILL KEEP YOUR SURFACE COOL?

Geofill uses a process known as evaporative cooling to keep surfaces cooler. Evaporative cooling is the process in which liquid evaporates, decreasing the temperature of the surface. For example, when athletes sweat moisture evaporates from the surface of their skin causing a cooling effect, which regulates body temperature.

Heat and evaporation are key components to understanding the evaporative cooling process. Water can hold a lot of heat, the heat stored in water is known as latent heat. As water absorbs enough heat, it changes from liquid to gas, it evaporates. When it leaves the surface as gas it takes the heat with it, resulting in decreased surface temperature.

Geofill uses its water retention capabilities and the evaporative cooling process to create a cooler more comfortable playing surface for athletes. As the intensity of the sun increases, the amount of water evaporating in Geofill increases, this causes more of the cooling effect to take place.



- When compared to crumb rubber infilled fields, fields with Geofill have been seen to be 40° F cooler than traditional synthetic turf fields.
- Geofill does not absorb energy like other synthetic alternative fields, therefore it is naturally cooler. Other composite or synthetic alternatives cannot provide the cooling effect that Geofill can.

## OTHER BENEFITS TO GEOFILL

Geofill systems are the only infill systems that are capable of holding 6 to 8 times its weight in moisture. This means Geofill's water retention and cooling capabilities help to maximize your water resources and reduce your heat footprint.

While fields containing Geofill have the same natural ability to absorb and release moisture like natural soils and grass, Geofill does not require watering every day. In fact, many fields with Geofill rely solely on natural hydration to keep the fields biomechanical performance metrics at peak levels. For those who demand the highest performing surfaces on gameday, irrigation systems can be added to the design of the field, providing unmatched performance and a natural feeling only found on professional grass fields. Water savings from using Geofill will also reduce the cost of maintenance.

