



## KINGSFORD® CHARCOAL WITH SURE FIRE GROOVES™

### Kingsford Charcoal: The Original Charcoal Briquets

Henry Ford created the first charcoal briquet in the 1920s with the help of Thomas Edison and E.G. Kingsford. The Kingsford Company was founded shortly afterward, and with it the distinctly American pastime of charcoal grilling. The Kingsford Company is proud of its heritage and takes tremendous pride in its role in creating memories of great-tasting barbecue shared by friends and family. As the leading manufacturer of charcoal briquets, we make it our responsibility to expand the popularity of this fun and memorable pastime.

### New Kingsford Charcoal with Sure Fire Grooves

The Sure Fire Grooves briquet provides a major performance improvement when compared with previous Kingsford Charcoal and other charcoal briquet brands. Compared with our previous charcoal briquet, the Sure Fire Grooves briquet shortens the amount of time it takes to get the briquet pile lit by 38 percent, reduces the time it takes the briquets to be ready to cook on by 22 percent, and increases the amount of time you have to cook your food by 13 percent. These are significant improvements, considering our previous briquet already led the field in these key quality attributes.

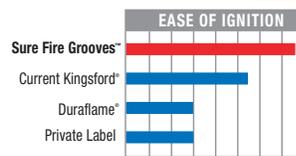
While everybody uses charcoal in their own way, the main phases a charcoal briquet experiences while burning are the same. We refer to these phases as the “grilling timeline,” which consists of Ease of Ignition, Time to Cooking Readiness, and amount of cooking Time Over 380 Degrees. Our goal in launching Kingsford Charcoal with Sure Fire Grooves was to improve upon each phase in the grilling timeline to provide a better experience for everyone from the casual backyard griller to the passionate low and slow barbecue competitor.

### The Science Behind These Improvements

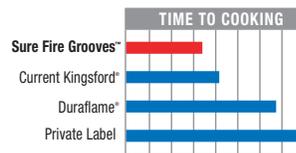
#### Shape Improvement

The Sure Fire Grooves improvement increases the number of edges on each briquet, increases the surface-area-to-volume ratio of the briquet, and allows for greater airflow through the pile of briquets.

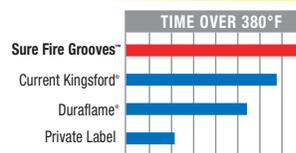
#### 38% Improvement in Ease of Ignition



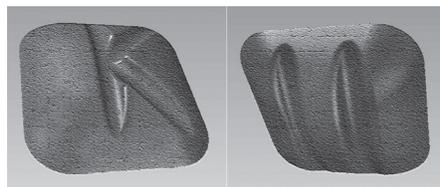
#### 22% Improvement in Time to Cooking Readiness



#### 13% Improvement in Time Over 380°F



The edges are the first part of the briquet to light, and by increasing the amount of edges the entire briquet lights easier. More surface area in a briquet with the same physical dimensions as the previous briquet enables Kingsford Charcoal with Sure Fire Grooves to light faster. The grooves also create more effective paths within the briquet pile for the air to flow through, and more air means more oxygen, resulting in a more efficient lighting phase. By lighting quickly and more efficiently, the Sure Fire Grooves briquets conserve energy normally consumed during lighting and heating, which leaves more energy available to use while you are grilling or barbecuing.



#### Formula Improvement

In addition to optimizing the shape of the briquet, we have improved the formula. Charcoal briquets are a blend of ingredients designed to deliver optimum performance across all three burning phases. Some materials enhance the ability of the briquet to light easily, and some materials enhance its ability to burn for a long time. A briquet with too much “easy lighting” material would not burn long enough and a briquet with too much “long burning” material would be difficult to light.

The development of the Sure Fire Grooves briquet allowed us to revisit and rebalance these ingredients. Because the new grooved briquet shape makes lighting easier, we added more long burning wood char. This increase in wood char also provides more of the smoky aroma and flavor that charcoal enthusiasts have come to expect from Kingsford charcoal.

#### Retort Wood Char

The process used to produce wood char in a kiln has been around for centuries, with the technology remaining essentially unchanged. In this process, a kiln is loaded with a large quantity of various sizes and types of wood and ignited. Airflow is controlled through dampers and gates to convert the greatest amount of wood to char, while trying to prevent the wood from becoming ash. Unfortunately, the quality of kiln char varies not only within each kiln batch but also between batches. As a result, the quality and performance of charcoal briquets that use kiln char varies widely.

The Kingsford Company manufactures wood char via a proprietary production method that is far superior to kiln technology. We use a continuous, multizoned retort furnace to precisely control the reactions that generate wood char. Not only do we quality control the wood entering the process, but we also control the temperature within each zone and the overall time the wood is present in the furnace. This enables us to precisely dictate the physical properties of our retort wood char. Kingsford retort wood char is tailored to ignite easily, while maximizing the characteristics that also provide a longer cooking time.

With the increase in retort char in the Sure Fire Grooves briquet formula, launching Kingsford Charcoal with Sure Fire Grooves required a significant investment in both raw material costs and in building a new retort facility to ensure that enough retort char could be produced to meet our stringent production and high quality requirements.

#### Testing Charcoal the Right Way

The Kingsford Research & Development team has spent decades perfecting the test methods used to scientifically test charcoal for quality attributes. We have learned that there is a great deal of variation in testing charcoal and that it is of utmost importance to test numerous samples to remove variability not specifically related to the charcoal. It is also very important to test a representative set of samples to get the true average performance and not be fooled by testing one sample that may not be representative of typical charcoal briquet performance.



You may have seen ad hoc tests that draw conclusions about product performance based on a sample size of one. Charcoal enthusiasts use many different grills and smokers. They light charcoal using varied methods and cook in different weather conditions. It is likely that a barbecuer using Kingsford Charcoal with Sure Fire Grooves on a kettle-style grill will get different results from someone using a Big Green Egg® or a low and slow charcoal smoker. The important thing to remember is that to experience the full benefits of the Sure Fire Grooves innovation, you may have to make minor adjustments to how you barbecue and grill. With these adjustments we are confident that you will find no better charcoal briquets on the market.

## Questions That Experienced Grillers and Barbecuers May Have About the New Briquets



### The old Kingsford charcoal was great, why change it?

It is easy to look at our previous briquet and say, why change something that was perfect, but we believe that our users deserve more. We set out to create a briquet that could improve performance and deliver a better overall experience for both grillers and barbecuers. By noting the advantages of Kingsford charcoal and slightly modifying your cooking approach, you should experience a far superior product that we know you will appreciate even more.

### The new bags weigh 10 percent less than they did before. How can you claim that they last the same as the old bags?

Our research shows that charcoal users measure charcoal by volume, not by weight. While each Sure Fire Grooves briquet weighs 10 percent less than before, there are the same number of briquets in a bag (allowing for normal manufacturing variance). The weight reduction is a result of the mass removed by the grooves. While the grooves reduce the weight of a briquet, the physical volume of each briquet remains the same. When you pour briquets for a barbecue, you should use the same number of briquets you always have. The pile, however, will now weigh 10 percent less. With the increased wood char in each briquet, even though the pile weighs 10 percent less, you will get a longer overall burn time than before.

### If there is roughly the same number of briquets in each bag, but the new briquets weigh less, then a bag should not last the same. Your claim that it does is counterintuitive.

Not all mass is created equal. We have improved our formula so that there is more fuel (carbon) in each briquet than before. We measure the energy of a briquet by British Thermal Unit (Btu). The greater the Btu in a briquet, the more energy there is available for cooking. Since Kingsford charcoal with Sure Fire Grooves is a more efficient burning charcoal, less Btu are consumed during the ignition phase, conserving more fuel for the cooking phase.

### If the briquets are ready to cook on faster, doesn't this mean that they are also burning faster?

Kingsford charcoal with Sure Fire Grooves briquets will reach cooking temperature faster because they light more efficiently, thereby saving energy. This contributes to an overall longer burn time. As the briquets are ready to cook on sooner, it is important to take advantage of this available cooking time. Grillers should start grilling earlier, and low and slow barbecuers should begin dampening the smoker at lower temperatures than they have before.

### When I "low and slow" barbecue, I need to use more Sure Fire Grooves briquets than I did with the old product.

In our extensive testing, we found that for all grilling and barbecuing occasions Sure Fire Grooves briquets provide a longer cooking time than both previous Kingsford and other brands of charcoal briquets. To get the most out of Kingsford Charcoal with Sure Fire Grooves in a low and slow cook, you may have to adjust your process. We have found that because Sure Fire Grooves briquets get hotter faster, it helps to begin dampening the vents at a lower temperature than before in order to more easily hit the 225 degrees to 250 degrees target temperature. You may try smoking with the vents closed more than you normally do to help harness the additional heat. One last trick is to settle the briquets before lighting, so they pack a little tighter. This should slow down the draft through the briquet pile, thereby slowing the lighting process.

### I have noticed that there is more ash with the new Sure Fire Grooves.

Sure Fire Grooves briquets should have 10 percent less ash than our previous briquets, because each briquet has 10 percent less mass.

### The new briquets seem to flame longer than the old briquets.

You may notice that the new briquets appear to have a longer flame time when using lighter fluid. Because Sure Fire Grooves briquets light faster and burn slightly hotter, the lighter fluid will actually burn off faster than before. What you may be seeing is called char flame, which is orangish in color and results from the increased amount of wood char in the formula. This can be distinguished from the lighter fluid flame, which is more yellow. If Sure Fire Grooves briquets are completely covered in ash, all of the lighter fluid has burned off.

### How do you test your product to get the results you get? What exactly are the conditions you use?

We have a test facility that is calibrated on a monthly basis with a standard lot of charcoal. All of the equipment used in our tests is calibrated on a monthly basis. The environmental conditions of the testing room are controlled, and we do not test if the room falls outside of the permitted range. All products that we test are stored in a controlled environment so that they equilibrate to that environment, allowing for all products tested from that room to be equally compared, no matter when the testing takes place. Because we want to control the environment, we test indoors, which requires exhaust for the carbon monoxide. The exhaust drafts are calibrated monthly to make sure that a change in draft does not influence the results.

### Why are your results more valid than those of Web sites that have tested your products? Why should consumers believe Kingsford test results over other tests?

It is important to understand that there is a great deal of inherent variability in charcoal testing. This makes it absolutely critical to test in replicate. It is also very important to compare apples to apples to make sure that no other variables are influencing the test results beside the charcoal itself. Two common variables that affect performance are storage conditions, which influence the physical properties of the briquets, and the conditions of the test environment which, if left unchecked, could change from test to test and affect the results. Representative samples are absolutely critical as well, because there is variability in the production of charcoal, which can affect performance. By getting a truly representative set of samples, we eliminate the variables in the final results and avoid evaluating a product based on one test, which may not be representative of the overall average. In a typical year, we conduct between 3,000 and 5,000 burn tests, all with the same scientific rigor and with an unbiased data collection system.

