



King Plastic Corporation

King CuttingBoard® Now with Antimicrobial Technology FAQ

What is King CuttingBoard®

King CuttingBoard® is a high-density polyethylene sheet for food applications with an advanced antimicrobial technology for protecting the cutting board against stain and odor-causing microorganisms. It is the product of a proprietary process called K-Stran™, the most advanced manufacturing process for superior flatness and consistency. King CuttingBoard® has a natural matte finish on both sides of the sheet. The natural polyethylene color creates a clean and sanitary look that commercial food processing operations require. King CuttingBoard® is now manufactured with an advanced antimicrobial technology to produce a more effective application compared to our formerly untreated cutting board polymer sheet. The non-porous surface does not absorb food odors and is easy to clean and sanitize. The antimicrobial technology inhibits product-damaging microbes from causing stains and odors on the cutting board surface. Studies have shown that surfaces with the antimicrobial technology can inhibit the amount of certain product-damaging microorganisms by 99.99%* compared to an untreated surface.

King CuttingBoard® antimicrobial polymer sheet is NSF listed to meet requirements of commercial food processing operations for direct and indirect food contact.

*For bacteriostatic, fungistatic, & algistatic properties. This product is exempt from registration under 40 CFR 152.25(a). Antimicrobial effectiveness verified by ISO and ASTM standards. The antimicrobial is for protecting the cutting board against stain and odor-causing microorganisms. This product does not protect users or others from food-borne bacteria. Always clean this product thoroughly after use. 99.99% effective inhibition rate has been achieved using standardized test methods of microorganism growth versus untreated controls in lab testing.

What type of finish?

Matte finish on both sides of the sheet.

What colors are available?

King CuttingBoard® is available in one standard color: Natural.

Can you custom color match?

Please call Customer Service at 941.493.5502.



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What is required for custom orders?

Please call Customer Service at 941.493.5502.

What sizes are available?

King CuttingBoard® standard sheet size is 48" x 96" and 60" x 120". Standard gauges are 1/4", 1/2", 3/4" and 1". Custom sheet sizes and gauges available upon request. Please call Customer Service at 941.493.5502.

Is King CuttingBoard® available with an antimicrobial?

Yes. King CuttingBoard® comes standard with an advanced antimicrobial technology for protecting the cutting board against stain and odor-causing microorganisms.*

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Is King CuttingBoard® available with a Flame Retardant?

No.

What are the features and benefits of King CuttingBoard®

- Advanced antimicrobial technology is EPA registered
- NSF Listed
- BPA Free, raw material does not contain BPA's or Phthalates
- Made in USA
- Easy to clean
- Dishwasher safe
- Environmentally friendly, recyclable, smart, sustainable
- Easy to fabricate
- Will not dull knives like wood cutting boards

How to sell against competing antimicrobials i.e. silver, triclosan?

Silver and Triclosan both leach a toxin into the environment. They must leach their active ingredient and the microbe must metabolize (ingest) the "poison" to be effective. This mode of action can lead to environmental contamination, and resistant and adaptive organisms. By contrast, King Plastic's advanced antimicrobial technology is non-leaching and non-



migrating. The advanced antimicrobial technology disrupts the cell wall of a microbe, and is not depleted over time. It is an environmentally preferable solution to controlling microbes. (SEE CHART).

	King Advanced Antimicrobial Technology Silane-Based	Silver-Based	Triclosan-Based
Mode of Action	Physically ruptures the cell membrane	Releases ionic free radicals that react with cell DNA and disrupt the critical life processes in the cell	Releases toxic bischlorinated phenol (PBC) for consumption or cellular absorption, causing lethal mutations in the cell
Leaching: Bleeding onto the user, into the water, and into the environment	No leaching or migrating	Leaches for its mode of action Must leach to work	Leaches for its mode of action Must leach to work
Durability	Permanent	Service life 1-3 years	Service life 1-3 years
Cost	Economical	The cost of silver is high	Intermediate
Effectiveness	Bacteria, fungi and algae that cause stains and odors	Action variable based on concentration and test or use conditions	Action variable based on concentration and test or use conditions
Log Reduction(1-6, 1 being the lowest, 6 being the highest)	4 on 24 hour test & 2 hour test	1-2 on a 24 hour test	2 on a 24 hour test
Distribution	World wide	Varies by company	Not accepted or available in certain areas of the world

Has King Plastic’s advanced antimicrobial technology been tested for efficacy?

King CuttingBoard® advanced antimicrobial technology has been tested at third party microbiology labs using ASTM E2149 and JIS Z2801 to verify its effectiveness against representative gram positive and gram-negative bacteria. 99.99% effective inhibition rate has been achieved using standardized test methods of microorganism growth versus untreated controls in lab testing.

Is King Plastic’s advanced antimicrobial technology registered with the EPA?

It is exempt from EPA registration under 40 CFR 152.25(a) (commonly known as the “treated article exemption”). The active antimicrobial ingredient in King CuttingBoard® is EPA registered and accepted for use in polymers and plastics.



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Why can't King Plastic say the final products made from King CuttingBoard® kill 99.99% of bacteria, etc.?

To make these claims extends far beyond what is allowed under the treated article exemption – protection of the article (King CuttingBoard® polymer sheet) from food-borne microorganisms, thus extending the life of the material. To make these claims, King CuttingBoard® itself would need to be EPA registered. The EPA reserves those types of kill claims for sanitizers, disinfectants, and sterilants. Per EPA regulation, solid surfaces can contain an antimicrobial, but only for the protection of the product itself. Making 99.99% claims implies a public health claim. EPA does not want people thinking that because the cutting boards are antimicrobial, for instance, perhaps they don't have to clean them. Standardized cleaning and disinfection are still the best practice. King CuttingBoard® is a durable material with antimicrobial technology for protecting the cutting board against stain and odor-causing microorganisms. This product does not protect users or others from food-borne bacteria. Always clean thoroughly after use. The 99.99% effective inhibition rate has been achieved using standardized test methods of microorganism growth versus untreated controls in lab testing.

Why doesn't it extend such protection to user?

Extending the claims to public health organisms (E.coli, MRSA, etc.) would require EPA registration. Extending those claims to protection of people (i.e. reducing the spread of a disease), would make the plastic sheet a drug or device subject to FDA requirements. We are not claiming to protect people. We are protecting our surfaces. Claiming to protect a persons' health is in the realm of disinfectants and sanitizers (EPA) and drugs (FDA). Regular cleaning and disinfection is still the best practice for keeping people healthy. King CuttingBoard® is a durable material with antimicrobial technology for protecting the cutting board against stain and odor-causing microorganisms.

How can the material be fabricated and finished?

Use standard woodworking tools: table saws, table routers, drills, blades and bits. Carbide router bits with two to four flutes are recommended. For more information, please refer to the fabrication brochures.



How to clean and maintain?

Scrape off any food with a scrub brush, bristle brush or food scraper

Dish Soap and Water:

- Hand wash thoroughly with a scrub brush or bristle brush, dish soap and hot water
- Rinse thoroughly, and allow to air dry

Dishwasher:

- Run the cutting board through the dishwasher on the hottest setting
- Remove from dishwasher before the drying cycle, allow to air dry

Vinegar:

- Wash the cutting board with dish soap and water
- Pour white vinegar over the cutting board or use a white vinegar spray
- Rinse clean, allow to air dry

Hydrogen Peroxide:

- Hand wash thoroughly with a scrub brush or bristle brush, dish soap and hot water
- To remove stains, use 3% hydrogen peroxide
- Spray or pour hydrogen peroxide over the cutting board until it is wet
- Allow the hydrogen peroxide to soak for several hours or overnight
- Wash cutting board with dish soap and hot water, allow to air dry

Baking Soda, Hydrogen Peroxide, and Dish Soap:

- Make a paste from 3-4 tablespoons of baking soda, 1 tablespoon of dish soap, and 1-2 tablespoons of hydrogen peroxide to make an easily spreadable but not soupy mixture
- Spread the cleaner all over one side of the cutting board and allow to sit for several hours or overnight
- Wipe or rub off the cleaner, wash the cutting board with dish soap and water, and allow to dry

How to Care and Store?

- Store the sheets flat on a level surface
- Keep away from teak oil and other products that can stain the finish
- Use china markers or water-based markers to draw patterns
- Pen marks can usually be removed with household cleaners
- Keep away from heat sources that exceed 180°F



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- Because there is no grain, parts can be cut from any area of the sheet
- Save the scraps for small parts, shims, spacers and plugs
- Remnants may be eligible for recycling; contact your distributor or King Plastic Corporation for details

What are common applications?

- Buffets
- Butcher Blocks
- Commercial and Consumer Cutting Boards
- Food Preparation and Packaging
- Food Processing Components
- Salad Bars

Is King CuttingBoard FDA approved?

Yes. FDA 21 CFR 177.1520.

Is King CuttingBoard® with advanced antimicrobial technology NSF listed?

Yes, NSF Standards 2 and 51.

Can I use a CNC machine?

Yes.

Will the material produce dust when fabricating?

No, only small shavings that can be recycled.

Can I use glue or paint?

Gluing is not recommended. Because King CuttingBoard® sheet products are designed to resist water and grime, they cannot be painted and the use of adhesives is not recommended. It is preferable to mechanically fasten or weld. Specialized welding equipment and rods, designed for use with polymer sheets, are available.