

# WORKS LIKE WOOD

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## LASTS A LIFETIME



**KING**  
**STARBOARD** **ST**

## Imagine the possibilities for your business

Cabinet and furniture pros everywhere are discovering exciting new business opportunities in the fast-growing outdoor living category and commercial markets, thanks to a super-tough polymer sheet stock called King StarBoard® ST.

Now you can build profits by creating an outdoor living space for your customers that's tough enough to last a lifetime, yet luxurious enough for even the most elaborate homes.

Over the past 20 years, the King StarBoard family of polymer sheets has changed the way boatbuilders think about their designs. Its rich factory finish, immunity from rotting and environmental stabilization have opened up a world of innovation that traditional building materials simply can't match. Now, it's bringing marine-grade toughness to the building trades market.

King StarBoard® ST is formulated to meet the exacting needs of outdoor kitchen and cabinet professionals. The sheets are easy to fabricate using familiar woodworking tools and techniques, last a lifetime without refinishing and are available in today's most popular colors.

### Common applications include:

- Amusement Parks
- Garage Cabinets
- Laboratories
- Medical Facilities
- Marine/RV Applications
- Outdoor Furniture
- Outdoor Kitchens
- Pet Facilities
- Pool Areas
- RTA Furniture
- Schools
- Signs, Awards and Plaques
- Store Fixtures/Displays
- Wet and Moist Areas
- And More



## King StarBoard® ST is:

- Ideal for all types of commercial and residential outdoor cabinets, furniture and storage
- Environmentally stabilized and made to last a lifetime
- Resistant to common molds and mildew
- Easy to clean and chemical-resistant. The sheets will not warp, rot, splinter, weaken or delaminate. Minor expansion and contraction must be accounted for in the designs.
- Scratch-resistant
- No finishing required
- Easy to fabricate using familiar woodworking tools and techniques. You can even make plugs to hide counter-sunk screws
- No glue required
- Handled like finished plywood, with no finishing required
- Designed for excellent screw holding strength and can be bent using back-cut techniques and heat
- Perfect material for using a CNC machine for routing the cabinet face
- Protected with masking to prevent damage during fabrication
- Parts can be welded together to form a single homogeneous component
- Cabinets made from King StarBoard® ST qualify for LEED Green building rating
- Over 4 times the joint strength rating of MDF. (Butt joint: MDF glued and screwed together, King StarBoard® ST is only screwed together)



## Fabrication and Finishing

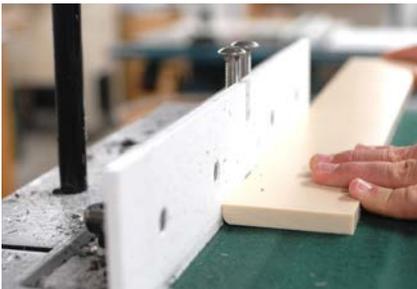
- Use standard woodworking tools: table saws, table routers, drills, blades and bits. Carbide router bits with two to four flutes are recommended.



- With a 1/2" diameter router bit, feed rates of 12-16 feet per minute are normal. Rates must be slower for material that is 1/2" thick or thicker. Larger bits have higher tip speeds and RPM adjustments may be necessary.



- Cut with a circular saw using a 40-60T. Expect a feed rate of 12-16 feet per minute.
- No surface finishing is required. King StarBoard® ST comes with a textured matte finish on both sides.



- Edges may be finished with a router. Sanding may be used, but a very fine sandpaper is required to avoid creating small, hard-to-clean scratches.

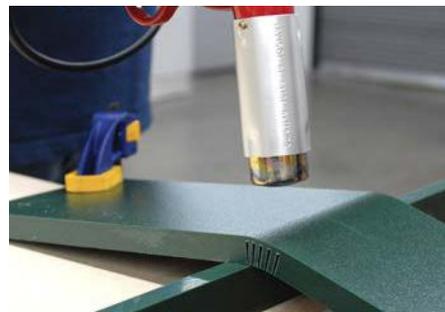


Polymer welding rods available

- Because King StarBoard® ST sheet products are designed to resist water and grime, they cannot be painted and the use of adhesives is not recommended. If gluing is absolutely necessary, products such as 3M's Scotch-Weld DP-8005 and Lord Corporation's 7540-AB have been used with some success. Special welding rods, designed for use with polymer sheets, are also available.

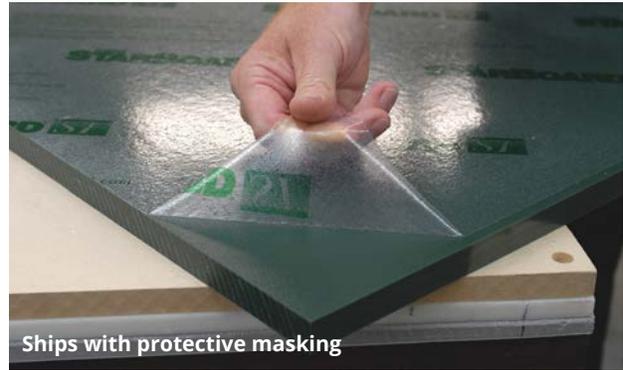


- Use standard fasteners with oversized holes. Drill pilot holes first, followed by an oversized hole to allow for expansion and contraction. Use press-in threaded inserts for applications where repetitive motion is expected, such as a door hinge.

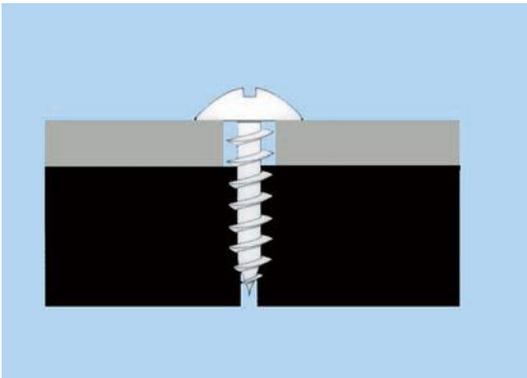


- Mild heat applied with a heat gun will help mold the sheets for curved installations. Sharper corners must be notched and then heat shaped.
- Hide fasteners with plugs made from King StarBoard® ST using a standard wood-plug cutter. Make the plug slightly larger than the hole for a press fit.

## Care and Storage



- 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 degrees F.
- 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.



- Test applications for unforeseen complications, such as expansion/contraction issues (note: different colors react differently to heat). King StarBoard® ST contracts and expands at a rate of  $6 \times 10^{-5}$  in./degree F, changing approximately 1/32 inch for every foot of length or width over a 40-degree temperature range.

## Cleaning and Maintenance



- King StarBoard® ST sheets are made to maintain their color and finish for the lifetime of the application. Only routine cleaning or pressure washing with common detergents is required.
- Nylon scrub pads and brushes should be used with care because excessive force can mar the finish.
- For resistant stains, apply bleach and allow it to soak in.
- Use citrus cleaner, alcohol or mineral spirits to remove grease or oil stains.
- Automotive silicone spray products or household furniture polish can help to hide scratches in the surface. To prevent slipping, do not use these products on walking surfaces.

# Easy to fabricate with standard woodworking tools

## You Will

- Cut it, bend it or fabricate it
- Sand it and engrave it
- Use standard woodworking tools
- Make plugs from it
- Create a finished edge
- Heat-weld it
- Easily clean it (including pressure wash)

## It Will

- Hold mechanical fasteners
- Never need maintenance
- Finish cleanly
- Contract & expand
- Resist most stains

## It Is

- Environmentally stabilized
- A "one-step" material, easy to fabricate
- Available in nine standard colors
- Impervious to most chemicals
- Made to last a lifetime
- Protected with a masking on one side
- Recyclable
- An ideal material for any "wet" areas
- Available in a 48" x 96" sheet

## It Has

- A matte finish on both sides
- Solid color throughout the sheet
- Color and tolerance consistency
- A thousand uses

## You Won't

- Paint it or use normal glues
- Stain it or damage it with fuel or oil spills
- Produce dust when fabricating it

## It Will Not

- Delaminate, rot or swell
- Retain odors, splinter or fade
- Easily scratch, scuff or wear

## It Is Not

- A structural material
- Expensive
- An appropriate countertop material

## It Does Not Have

- A smooth texture
- A grain that needs matching



# The specifications and quality you demand

## KingStarBoard® ST

### Standard Sheet Size

**in:** 48" x 96"

**mm:** 1219mm x 2438mm

### Standard Gauges

**in:** 1/4" 3/8" 1/2" 3/4" 1" 1-1/2"

**mm:** 6.4mm 9.53mm 12.7mm 19mm 25.4mm 38mm

### Approximate Weight

**lbs:** 40 lbs 60 lbs 80 lbs 120 lbs 160 lbs 240 lbs

**kg:** 18kg 27kg 36kg 54.4kg 72.5kg 108.6kg

Gauges 1/4" up to 1-1/2" ±5%

Length and width plus only at room temperature

Custom sheet sizes, gauges, and colors available

Properties	Units	ASTM	Nominal Values
Density	g/cc	D1505	0.963
Tensile Strength @ Yield	psi	D638	>4,500
Tensile Modulus	psi	D638	318,000
Elongation @ Break	%	D638	>600
Elongation @ Yield	%	D638	8.8
Flexural Modulus	psi	D790	225,000
Flexural Stress @ 5% Strain	psi	D790	4,480
Compressive Properties 10% Strain	psi	D695	4,790
Durometer	Shore D	D2240	69
Tensile Impact	ft.lbs./in.2	D1822	99
Izod Impact Resistance	ft.lbs./in.2	D256	1.4
Brittleness Temp.	°C (°F)	D746	<-75°C (<-103°F)
Vicat Softening	°C (°F)	D1525	132°C (270°F)
Heat Deflection Temp. 66 psi	°C (°F)	D648	84°C (183°F)
Screw and Nail Withdrawal	lbs	D1761	755 & 55
Flammability	Rating	UL94	HB

All values are determined on specimens prepared according to ASTM.

Nominal values should not be interpreted as specifications.

King StarBoard® ST is made entirely from FDA and USDA approved materials.

King StarBoard® ST meets ASTM D4976.

King StarBoard® ST contains no VOC's.

Active ingredient (Biosafe®).....antimicrobial siloxane EPA Reg. No. 83019-1

\*For bacteriostatic, fungistatic, & algistatic properties. This product is exempt from registration under 40 CFR 152.25(a). King MicroShield® effectiveness verified by ISO and ASTM standards. This product does not protect users or others from disease-causing bacteria. Always clean this product thoroughly after use.

Biosafe® is a registered trademark of BIOSAFE, Inc.: Patent number 7,851,653 and 7,858,141.

## Standard Colors



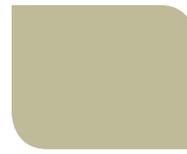
Black



Mocha Brown



Evergreen



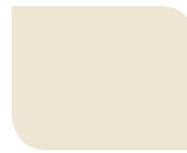
Everglade



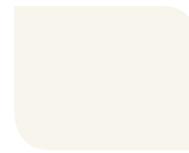
Charcoal Gray



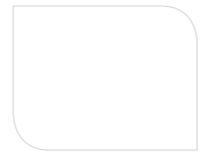
Dolphin Gray



Sansshade



Seafoam



White/White

Note: Color accuracy can vary considerably on computer monitors and printers. Please consult your distributor for a product sample before making critical color choices.

## Now Upgradable to King MicroShield®

Many of King Plastic Corporation's polymer sheets, slabs and massive shapes are upgradable to King MicroShield with an exclusive antimicrobial additive from Biosafe®, the latest technology for protecting the product surface against stain and odor causing bacteria, algae and fungi\*

The antimicrobial agent is bonded at the molecular level throughout the polymer sheet and will not leach out, this means the antimicrobial will retain its efficacy and does not harm the environment.

King MicroShield polymer products are easy to clean and disinfect using standard cleaning and disinfecting procedures.



Active ingredient (Biosafe®).....antimicrobial siloxane EPA Reg. No. 83019-1

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