

# SIMONA® HDPE BOATBOARD® Cabinet-grade Sheet

*UV and weather-resistant polymers for outdoor furniture and cabinetry. Offering long-term durability and color performance.*



SIMONA® HDPE BOATBOARD® sets the high bar for its combination of long-term performance, durability, appearance and fabrication ease and consistency.

In boat building components, this tough, UV resistant sheet withstands long term exposure to intense sun, salt water and rigorous use. This also makes it ideal for outdoor patio, poolside and marina cabinetry, furniture and accessories. Its impact resistance, FDA compliance, easy-to-clean surface and attractive appearance enhance indoor medical, clinical and laboratory cabinetry as well.

Unlike plywood, SIMONA® HDPE BOATBOARD® won't delaminate, rot or splinter, and its integral colors hide scratches and marring that ruin painted surfaces. Its stain resistance, easy-to-clean matte finish and wide spectrum of integral colors further assure long lasting appearance and functionality.

In fabrication, it maintains exceptional flatness and dimensional stability for high production yields and finished part quality. Standard woodworking equipment works well with the material, and fabricators appreciate its advantages especially in thicker gauges for large flat, formed or machined parts.

## Advantages

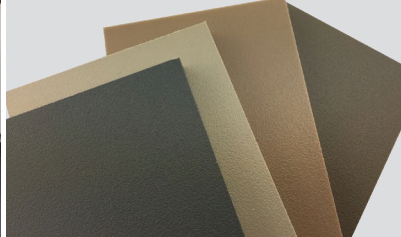
- UV and extreme weather resistance
- Integral color hides marring, scratches
- Solid polymer composition won't delaminate, rot or splinter
- Uniform color and surface consistency, no need sand or paint
- Maintenance-free, easy to clean
- Excellent impact resistance
- Easy to fabricate using standard woodworking tools
- Available with SIMOGUARD® antimicrobial

## Applications

- Indoor and outdoor cabinets
- Furniture and seating components
- Picnic tables
- Bar storage and serving areas
- Pool equipment boxes
- Cutting boards
- Marine and boat components
- Waste containers
- Retail displays

## Configurations

- Sheet sizes
  - 54 x 96 in. (1,372 x 2,440 mm)
  - 48 x 96 in. (1,219 x 2,440 mm)
- Gauges
  - 1/4; 3/8; 1/2; 3/4; 1.0 in. (6.4; 9.5; 12.7; 19.0; 25.4 mm)
- Colors
  - Polar white; Bright white
  - Dolphin gray; Glacier gray
  - Seafoam; Sandshade
  - Brown; Mocha; Black
  - Beige; Tan; Cappuccino; Ash gray
- Texture: Matte 2 sides
- Masking: 1 side
- Custom colors, sizes: On request



SIMONA® HDPE BOATBOARD® offers exceptional flatness, stability and consistency in machining and fabrication.

## MACHINING AND FABRICATION RECOMMENDATIONS

### Tolerance Information

- ± 5% for gauges 1/4in. up to 3/4in.

### Approximate Weight

- 1/2 in. (12.7 mm) – 90 lbs (40.8 kg)
- 3/4 in. (19 mm) – 135 lbs (61.2 kg)

### Cutting and Sawing

SIMONA HDPE can be cut using full range of saw types. Follow recommendations by tooling manufacturers for 'soft plastics.'

### Drilling

Standard twist drills work well. A negatively ground rake angle prevents drill jamming.

### Turning

Turn using as low a feed as possible with a large cutting depth. Indexable inserts can help provide a smooth cut.

### Milling and Routing

High RPM equipment typically used for metals works well. Feed rates between 10 and 16 per minute are recommended.

### Conduct a Pre-production Trial

To make adjustments and ensure a good finish without scorching or melting the material.

### Hardware

Stainless steel fasteners and hardware recommended as well as screws designed for plastics. Allow for thermal expansion and contraction depending on temperature.

## PROPERTIES SIMONA® HDPE BOATBOARD®

PROPERTY, Units of Measure <sup>1</sup>	Test Method	TYPICAL VALUES	
		SIMONA® HDPE BOATBOARD®	
Specific Gravity	ASTM D792	0.97	
Water Absorption, %	ASTM D570	<0.1	
<b>MECHANICAL</b>			
Tensile Strength @ Yield	ASTM D638	4,400 psi	30.4 MPa
Elongation @ Break, %	ASTM D638	>300%	
Flexural Modulus	ASTM D790	240,000 psi	1,655 MPa
Notched Izod Impact	ASTM D256	2.75 ft-lb/in.	146.8 J/m
Hardness, Shore D	ASTM D2240	68	
Abrasion Resistance mg/1000	Taber CS 17	—	
Coefficient of Expansion x 10 <sup>-5</sup>	ASTM D696	10.0	
<b>THERMAL</b>			
Melting Point	ASTM D3418	267 °F	130.7 °C
Heat Deflection Temp. @ 66 psi (0.45 MPa)	ASTM D648	167 °F	75 °C
Heat Deflection Temp. @ 264 psi (1.8 MPa)	ASTM D648	110 °F	43.4 °C
<b>FDA</b>			
FDA reg. 21 Chapter 1 part 177.2510	—	Yes	

<sup>1</sup>All tests at 73°F (22.8°C) in dry conditions unless otherwise noted.

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