

## SIMONA® HDPE BOATBOARD®

*Proven in extreme marine conditions. Maintenance-free integral colors. Long-term durability for boat building components, outdoor and indoor cabinetry.*



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 panels.

### Advantages

- Integral color hides marring, scratches
- Solid polymer composition won't delaminate, rot or splinter
- Uniform color and surface consistency
- Maintenance-free, easy to clean
- Resists impacts, extreme weather
- Easy to fabricate using standard woodworking tools

### Applications

- Instrument panels
- Instrument and control base plates
- Deck and seating components
- Doors, hatch and well covers
- Tables, trim, cabinets
- Storage and tackle bins
- Cup and rod holders
- Steps, grab rails

### Configurations

- Sheet sizes
  - 54 x 96 in. (1,372 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; Black
- 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.

## 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 x10 <sup>5</sup>	ASTM D696	10.0	
<b>THERMAL</b>			
Continuous Service Temperature	Maximum	170 °F	76.7 °C
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.

## 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 Polygrain 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

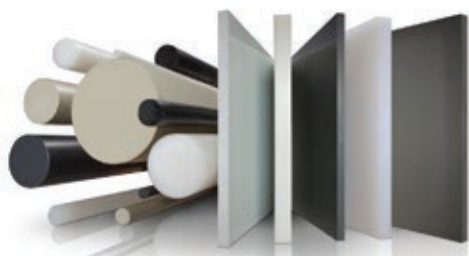
High RPM equipment typically used for metals works well. Feed rates between 10 and 16 per minute are recommended.

### 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.



SIMONA offers the widest product range of PVC sheet and rod – FM 4910 rated sheet – chemical resistant materials from PVC, PP and PE to fluoropolymers – orthotics and prosthetics sheet – Boltaron® aircraft sheet – plus proven products for boat building, outdoor furniture and many other industries.

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