



# High Density Polyethylene (HDPE) Sheet & Board

Product Code: LIBBYHQ | General Purpose & Food-Contact Grade

## 1. Product Overview

Libby Manufacturing Inc. HDPE sheet and board is engineered for outstanding performance across a broad range of industrial, agricultural, recreational, mechanical and food-contact applications.

Key Performance Attributes:

- **High impact resistance and superior stress crack resistance**
- **High tensile strength with excellent elongation**
- **Low moisture absorption and outstanding chemical & corrosion resistance**
- **UV, stain, odor, and moisture resistant**
- **Meets FDA 21 CFR 177.1520 requirements for direct food contact**
- **Easily cleaned, durable, and long-lasting**

## 2. Material Identification

<b>Product Identifier</b>	High Density Polyethylene Sheet (HDPE)
<b>Other Names / Aliases</b>	HDPE, Puck Board, Arena Board, Furniture Board
<b>Product Code</b>	LIBBYHQ
<b>Resin Supplier</b>	Bamberger Polymers (Canada) Corp. / Muehlstein (Ravago Group)
<b>Colorants</b>	White (50% TiO <sub>2</sub> concentrate, LLDPE carrier) Black (50% Carbon Black)
<b>Colors</b>	White, Black, Dark Blue, Gold, Red, Yellow, and custom colours available
<b>Odor</b>	Odorless
<b>Physical Form</b>	Rigid sheet / board
<b>Appearance</b>	White, smooth or textured surface

## 3. Physical & Mechanical Properties



**TECHNICAL DATA SHEET**

All values are nominal and tested per ASTM/DIN standards. Users should perform their own tests to verify suitability for specific applications.

Property	Test Method	Units	Nominal Value
Density	ASTM D-792 / D-1505	g/cm <sup>3</sup>	0.954 – 0.955
Tensile Strength at Yield	ASTM D-638	psi	>4,000
Tensile Strength at Break	ASTM D-638	%	>600
Elongation at Yield	ASTM D-638	%	18
Elongation at Break	ASTM D-638	%	700
Tensile Impact	DIN 53448 / D-1822	ft-lbs/in <sup>2</sup>	115 – 550
Flexural Modulus	ASTM D-790	psi	165,000 – 185,000
Flexural Strength	ASTM D-790	psi	3,800
Izod Impact	ASTM D-4020	ft-lbs/in <sup>2</sup>	17
IZOD Impact Notched	ASTM D-2240	ft-lbs/in <sup>2</sup>	3.5
Hardness	ASTM D-2240	Shore D	65 – 68
Melt Index	ASTM D-1238	g/10 min.	0.25
Melting Point	ASTM D-3417	°F	290
Heat Deflection Temperature	ASTM D-648	°F / °C	165°F / 80°C
Vicat Softening Temperature	ASTM D-1525	°C	123
Max. Operating Temperature	—	°F	170
Low Temperature Brittleness	ASTM D-746	°C	< -82
Coeff. of Linear Thermal Expansion	ASTM D-696	in/in/°F	6.7 × 10 <sup>-5</sup>
Volume Resistivity	ASTM D-257	Ohm-cm	>10 <sup>15</sup>
Surface Resistivity	ASTM D-257	Ohm	>10 <sup>15</sup>
Water Absorption (24 hrs.)	ASTM D-570	%	0.0001

#### 4. Regulatory & FDA Compliance

Regulation / Standard	Scope / Requirement	Status
FDA 21 CFR 177.1520	Polyolefin for food-contact surfaces	✓ <b>Compliant</b>



Regulation / Standard	Scope / Requirement	Status
<b>Conflict Minerals (Dodd-Frank)</b>	No tantalum, tin, gold, or tungsten added	✓ <b>Confirmed</b>
<b>California Prop 65</b>	Prop 65-listed chemicals not intentionally added	✓ <b>Expected Compliant</b>
<b>Heavy Metals (CONEG)</b>	Total lead, mercury, cadmium, Cr-VI < 100 ppm	✓ <b>Compliant</b>
<b>Colorant</b>	FDA 21 CFR compliant white pigment concentrate	✓ <b>Compliant</b>

**FDA Compliance Summary**

The base HDPE resin supplied by various suppliers meets FDA 21 CFR 177.1520 for polyolefin articles intended for food-contact use. The white pigment concentrate conforms to FDA 21 CFR requirements and is free of diarylide or pyrazolone pigments and heavy metal compounds above CONEG thresholds. Conflict minerals (tantalum, tin, gold, tungsten) are not intentionally used in this product. California Proposition 65 compliance is expected as Prop 65-listed chemicals are not intentionally added.

*Note: Final compliance of finished articles is the responsibility of the end user. Contact Libby Manufacturing for specific regulatory documentation.*

## 5. Recommended Applications

Agricultural & Livestock	Recreational & Sports	Industrial & Commercial
<ul style="list-style-type: none"> <li>Barn &amp; livestock pen liners</li> <li>Feed troughs</li> <li>Stall dividers</li> <li>Dairy facility surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Arena boards (hockey / curling)</li> <li>Playground equipment</li> <li>Marine Dock Components</li> <li>Skateboard parks</li> <li>Outdoor Furniture</li> <li>Cabinetry</li> </ul>	<ul style="list-style-type: none"> <li>Building materials &amp; signage</li> <li>Food processing surfaces</li> <li>Chemical storage liners</li> <li>Wear strips &amp; guides</li> </ul>

## 6. Safety, Handling & Storage

<b>Hazard Classification</b>	Non-hazardous material (finished sheet/board form)
<b>Hazard – Mechanical</b>	Slip/Fall hazard from smooth sheet surfaces
<b>Dust (cutting/machining)</b>	May cause mechanical irritation to eyes, nose, throat. Wear appropriate PPE.
<b>Eyes – First Aid</b>	Flush with running water. Seek medical attention if irritation persists.



# TECHNICAL DATA SHEET

<b>Skin – First Aid</b>	Wash with soap and water. For molten material on skin, cool with water immediately.
<b>Fire Extinguishing</b>	Water, foam, dry chemical, or CO <sub>2</sub> . Material will burn but is not easily ignited.
<b>Storage</b>	Store in a dry, cool, well-ventilated place away from heat, sparks, and open flame.

## 7. Product Availability & Specifications

<b>Sheet Sizes</b>	4' x 8' (1220 x 2400 mm), 4' x 10' (1220 x 3050 mm), 5' x 10' (1524 x 3050 mm)
<b>Thickness Range</b>	2 mm – 38 mm (5/64" – 1.5"), tolerance ±5%
<b>Finishes</b>	Smooth (both sides) or Textured (one side)
<b>Colors</b>	White standard; custom colors available
<b>Custom Options</b>	Custom lengths, thicknesses, and colors available on request

## 8. Contact Information

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