

Manufacturer

Arborite
385 Lafleur, Lasalle (Québec), H8R 3H7
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Alternate manufacturing facility – Fletcher, NC

Product Description

Arboron is composed of papers impregnated with melamine and phenolic thermosetting resins, consolidated under high pressure and temperature into dense, uniform sheets with good electrical and mechanical properties. The melamine surface of Arboron provides excellent chemical and abrasion resistance. Its very high strength-to-weight ratio (one half the weight of aluminum) and relative ease of fabrication (carbide tipped tools) make Arboron your first choice for new designs.

EPG is a paper-based, solid phenolic laminate impregnated with phenolic thermosetting resins, consolidated under high pressure and temperature into dense, uniform sheets with good electrical and mechanical properties. EPG is an XPC grade industrial laminate that is ideal for cold punching and shearing

Arboron and EPG comply with NEMA LI 1 thickness and flatness. Arboron and EPG are manufactured by Arborite, Division of Wilsonart Canada ULC, an ISO 9001:2008 certified company.

Arboron and EPG have been successfully used in a number of applications including:

Electrical:

- Electrical control and test panels
- Switchgear mounting
- Bus bar insulation
- Phase barriers
- Electrical enclosures

Mechanical:

- Drill jigs and fixtures
- Non-conductive work benches
- Needle trade templates
- Die stock
- Transportation industry panels
- Conveyer applications
- Stage flooring

ARBORON

Physical Properties	Test Method	Value			
Density		86.4 lbs/ft ³			
Specific Gravity		1.39 g/cm ³			
Tensile Strength	ASTM D 638	MD-22,000 psi CD-14,000 psi			
Flexural Strength	ASTM D 790	MD-30,000 psi CD-24,000 psi			
Compressive Strength	ASTM D 695	Flatwise-45,000 psi Edgewise-26,000 psi			
Modulus of Elasticity	ASTM D 790	MD-2,000 ksi CD-1,300 ksi			
Izod Impact Strength	ASTM D 256	MD-1.0 ft-lb/in CD-0.82 ft-lb/in			
Bond Strength	ASTM D 732	2,000 psi			
Rockwell Hardness	ASTM D 785	113 M Scale			
Shear Strength (Punch Tool)	ASTM D 732	13,000 psi			
Wrap or Twist Tolerance	NEMA LI1	Meets Specification			
Thickness tolerance	NEMA LI1	Meets Specification			
Oil Compatibility	ASTM D 3455	No effect on electrical insulating oil/transformer oil			
Coefficient of Friction	ASTM C 1028	Dry-0.77 Wet-0.73			
Smoke Density	ASTM E 662	Meets NFPA 130 (National Fire Protection Association)			
Electrical	Test Method	Value			
Relative Thermal Index	Mechanical & Electrical	95° C			
Flame Classification	UL 94	0.061" – 94HB 0.240" – 94VO			
Arc Resistance	ASTM D 495	88 sec			
Dielectric Constant	ASTM D 150	1/8" 7.57 1/2" 7.67			
Dissipation Factor @ 1.0 kHz	ASTM D 150	1/8" 0.0827 1/2" 0.1087			
Dielectric Strength	ASTM D 149	Step/Step Perpendicular Short Time Perpendicular			
1/8"	347 volts/mil	439 volts/mil			
1/2"	129 volts/mil	158 volts/mil			
Dielectric Breakdown	ASTM D 149	Step/Step Parallel Step/Step Perpendicular Short Time Parallel Short Time Perpendicular			
1/8"	60 kV	60 kV	45 kV	67 kV	57 kV
1/2"	60 kV	60 kV	65 kV	62 kV	80 kV
Resistivity	ASTM D 257	Insulation Resistance Surface Resistance Volume Resistance			
1/8"		3.1 x 10 ¹⁰ Ohms	9.2 x 10 ¹¹ Ohms	5.7 x 10 ¹¹ Ohms-Cm	
1/2"		8.0 x 10 ⁹ Ohms	1.3 x 10 ¹¹ Ohms	1.4 x 10 ¹¹ Ohms-Cm	
Comparative Track Index (CTI)	600V				
High Ampere Arc Ignition (HAI)	200 +				
High Voltage Tracking Rate (HVTR)	0 mm/min				
Hot Wire Ignition (HWI)	107 sec				

EPG

Physical Properties	Test Method	Value		
Density		86.4 lbs/ft ³		
Specific Gravity		1.39 g/cm ³		
Tensile Strength	ASTM D 638	MD-30,000 psi CD-19,000 psi		
Flexural Strength	ASTM D 790	MD-30,300 psi CD-24,000 psi		
Compressive Strength	ASTM D 695	Flatwise-45,000 psi Edgewise-26,000 psi		
Modulus of Elasticity	ASTM D 790	MD-2,000 ksi CD-1,300 ksi		
Izod Impact Strength	ASTM D 256	MD-1.0 ft-lb/in CD-0.82 ft-lb/in		
Bond Strength	ASTM D 732	2,000 psi		
Rockwell Hardness	ASTM D 785	113 M Scale		
Shear Strength (Punch Tool)	ASTM D 732	14,000 psi		
Water Absorption	ASTM D 570	3.58%		
Wrap or Twist Tolerance	NEMA LI1	Meets Specification		
Thickness tolerance	NEMA LI1	Meets Specification		
Oil Compatibility	ASTM D 3455	No effect on electrical insulating oil/transformer oil		
Radiant Flux	ASTM E 648	Class A / Class 1		
Formaldehyde Emission	ASTM E 1333	0.03 ppm		
Coefficient of Friction	ASTM C 1028	Dry-0.64 Wet-0.63		
Electrical	Test Method	Value		
Relative Thermal Index	Mechanical & Electrical	130° C		
Flame Classification	UL 94	0.028" – 94HB 0.062" – 94HB		
Arc Resistance	ASTM D 495			
1/8"		41 sec		
1/2"		54 sec		
Dielectric Constant @ 1.0 kHz	ASTM D 150			
1/8"		8.1		
1/2"		9.3		
Dissipation Factor	ASTM D 150			
1/8"		0.151		
1/2"		0.223		
Dielectric Strength	ASTM D 149			
		Step/Step Perpendicular	Short Time Perpendicular	
1/8"		230 volts/mil	340 volts/mil	
1/2"		70 volts/mil	130 volts/mil	
Dielectric Breakdown	ASTM D 149			
		Step/Step Perpendicular	Short Time Perpendicular	
1/8"		30 kV	43 kV	
1/2"		36 kV	65 kV	

Arborite Arboron / EPG Standard Sheet Sizes

Arborite Arboron / EPG laminates are available in the following standard sheet sizes.

Imperial Measure (feet)	Metric measure (mm)
4' x 8'	1220 mm x 2440 mm

Warranty

Arborite, division of Wilsonart Canada ULC, warrants that, under normal use and service, the material and workmanship of its products shall conform to the standards set forth on the applicable technical data sheets for a period of twelve (12) months from the date of sale to the first consumer purchaser. Dealers and distributors are provided with the technical data sheets which contain specific standards of performance for the products. In the event that an Arborite product does not perform as warranted, the first purchaser's sole remedy shall be limited to repair or replacement of all or any part of the product which is defective, at the manufacturer's sole discretion.

This warranty applies only to product :

1. In its original installation; and
2. Purchased by the first consumer purchaser.

This warranty is not transferable, and expires upon resale or transfer by the first consumer purchaser.

This warranty shall not apply to defects or damage arising from any of the following :

1. Accidents, abuse or misuse;
2. Exposure to extreme temperature;
3. Improper fabrication or installation; or
4. Improper maintenance.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE. UNDER NO CIRCUMSTANCES SHALL THE MANUFACTURER BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM THE PURCHASE, USE OR INABILITY TO USE THIS PRODUCT, OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. NO FABRICATOR, INSTALLER, DEALER, AGENT OR EMPLOYEE OF ARBORITE, A DIVISION OF WILSONSART CANADA ULC, HAS THE AUTHORITY TO MODIFY THE OBLIGATIONS OR LIMITATION OF THIS WARRANTY.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state; therefore, some of the limitations stated above may not apply to you. It is to your benefit to save your documentation upon purchase of a product.

Specification Form:

Surface shall be Arborite Arboron / EPG Industrial Laminate

Produced by Arborite,