



MASS TRANSIT

SOLUTIONS

Your Plastic Experts

Piedmont Plastics® is committed to supporting the mass transit bus and rail markets with innovative compliant products and solutions.

We offer access to the most diverse vendors and resources available in the industry. Our network, coupled with our local distribution N. American footprint, make it easy to consider Piedmont Plastics when sourcing materials and solutions. We follow industry best practices and believe in a local, at home, feel while doing business with our valued customers.

Industries We Support

Most all of the materials offered are transparent tints and clear in color. These materials are most always balanced by compliance to price. Piedmont Plastics offers glazing materials compliant to the following DOT Codes:

DOT ANSI Z26.1-1996 --- AS2, AS3, AS4, AS5, AS6, AS7

Glazing & Partitions Portfolio

- Polycarbonate and acrylic sheet and parts
- DOT AS2, AS4, AS5, AS6 and AS7 compliant
- Fritted polycarbonate sheet and parts for structural bonding to window frames and bodies
- Custom sheet lamination, colors and coatings available upon request



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BUS & RAIL

SOLUTIONS

Polycarbonate Rail Glazing

Polycarbonate TG is a tough, hard-coated polycarbonate sheet built to deliver both clarity and strength in demanding rail applications.

Offered in 0.236" and 0.250" monolithic gauges, the material can be integrated into dual-glazed systems to meet strict U.S. Federal Railroad standards for impact resistance, ballistic protection, and flammability.

A thicker 0.460" monolithic option independently satisfies FRA requirements.

Precision manufacturing ensures low distortion for excellent visual quality, while the advanced hard coat layer defends against scratches, harsh chemicals, and prolonged exposure to the elements.

Polycarbonate TG is available in clear as well as a selection of standard and custom tints.



Polycarbonate Bus Driver Guards

Polycarbonate DG sheet is a hard-coated polycarbonate designed for outstanding optical clarity and long-lasting durability.

Available in 0.236" and 0.375" thicknesses with a specified extrusion direction for proper installation, it meets the rigorous demands of bus glazing applications.

Polycarbonate DG offers excellent abrasion and chemical resistance, along with superior impact strength to protect against vandalism and reduce the risk of driver assaults.

Its clear finish allows for open interaction between drivers and passengers without compromising safety. Polycarbonate DG complies with DOT/FMVSS 205 and ANSI Z26.1 Item AS-4 standards, and is NHTSA-approved for use as a protective driver partition.



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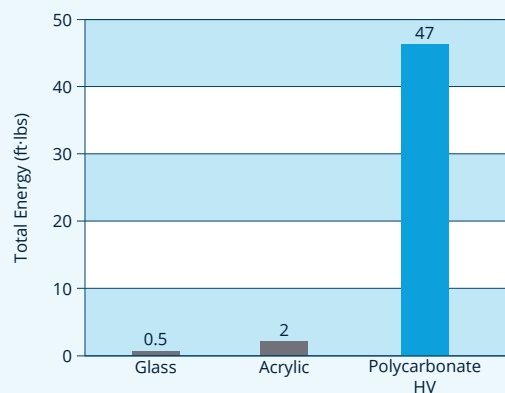


Polycarbonate Sheet

At Piedmont Plastics, we offer a comprehensive selection of transportation-grade polycarbonate sheet products engineered to meet the highest standards for safety, durability, and performance.

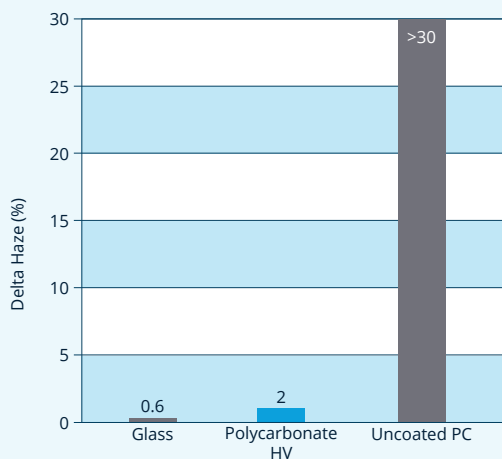
Our materials are specifically designed to withstand the demanding environments of the transportation industry - providing impact resistance, optical clarity, and compliance with key regulatory requirements across transit, rail, and specialty vehicle applications.

Impact Resistance



**Instrumented Impact per ASTM D 3763, sample thickness is 0.125" nominal*

Abrasion Resistance*



**Taber Abrasion per ASTM D 1044, 100 cycles, CS-10F wheel*

Chemical Resistance*

Chemical Tested	Resistance Time
Acetone	>24 hrs
Ammonia (10% concentration)	>24 hrs
Antifreeze (50/50)	>24 hrs
Benzene	>24 hrs
Bleach (Clorox concentrated)	>24 hrs
Chloroform	>24 hrs
Denatured Alcohol	>24 hrs
Di (2-ethylhexyl) phthalate	>24 hrs
Diesel Oil	>24 hrs
Isopropyl Alcohol (IPA)	>24 hrs
Kerosene	>24 hrs
Methyl Alcohol	>24 hrs
Methyl Butyl Ketone	>24 hrs
Methyl Ethyl Ketone	>24 hrs
Methylene Chloride	>24 hrs
Naphthalene, 1-bromo-	>24 hrs
Potassium Hydroxide - Lye (10%)	>24 hrs
Sodium Hydroxide (10%)	>24 hrs
Toluene	>24 hrs
Turpentine	>24 hrs
Unleaded Gasoline (87 Octane)	>24 hrs
Vinegar	>24 hrs
Xylene	>24 hrs
Acids	
Hydrochloric Acid (20%)	>24 hrs
Nitric Acid (20%)	>24 hrs
Sulfuric Acid (20%)	>24 hrs

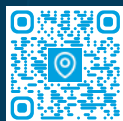
**Tested in accordance to ASTM D 1308-02*

Always keep hazardous chemicals away from uncoated edge of Polycarbonate Sheet



Property	Test Method	Units	Values
Physical			
Specific Gravity	ASTM D 792	-	1.2
Light Transmission, Clear @ 0.236", 0.250"	ASTM D 1003	%	84
Light Transmission, Clear @ 0.460"	ASTM D 1003	%	80
Chemical Resistance	ANSI Z26.1	-	Pass
Taber Abrasion @ 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
Mechanical			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Modulus of Elasticity	ASTM D 638	psi	340,000
Flexural Strength	ASTM D 790	psi	13,500
Compressive Strength	ASTM D 695	psi	12,500
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft-lbs/in	16
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft-lbs/in	No Break
Instrumented Impact @ 0.125"	ASTM D 3763	ft-lbs	47
Poisson's Ratio	ASTM E 132	-	0.38
Rockwell Hardness	ASTM D 785	-	M70/R118
Thermal			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
Electrical			
Dielectric Constant @ 10 Hz	ASTM D 150	-	2.96
Dielectric Constant @ 60 Hz	ASTM D 150	-	3.17
Volume Resistivity	ASTM D 257	Ohm-cm	8.2 x 10 ¹⁶
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
Dissipation Factor @ 1 MHz	ASTM D 150	-	0.01
Arc Resistance	-	-	-
Stainless Steel Strip Electrodes	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air @ 0.125 mils	ASTM D 149	V/mil	380
Flammability/Ballistic/Impact			
Federal Railroad Administration			
49 CFR Part 238, Appendix B	ASTM E 162	Is	<100
49 CFR Part 238, Appendix B	ASTM E 662	Ds (1.5 min) Ds (4.0 min)	<100 <200
49 CFR Part 223	Ballistic	-	Pass
49 CFR Part 223	Impact Type I & II	-	Pass
Bombardier Toxic Gas Generation	SMP 800-C	-	Pass

*Typical Properties are not for specification purposes



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