

# Piedmont AS2 Polycarbonate

## Where **Solutions** Take Shape for the Transportation Industry

Piedmont Plastics is committed to supporting Transportation market segments such as Bus, Rail, Aircraft, and Heavy Equipment with a multitude of industry-leading solutions, products, technologies, and services. Piedmont Plastics has the most diverse vendors and resources available to exceed our customers' expectations. For example, Piedmont Plastics offers AS2 certified Polycarbonate sheets and finished parts for your Bus Operator Protection needs. Our sheets are specifically produced to meet federal AS2 regulations for driver visibility and can be easily cut and drilled for manufacturing and assembly. For prototypes or production, no quantities are too large or small. Piedmont Plastics can provide high levels of support to meet your program needs from design to fulfillment.

### Solutions

- Bus
- Rail
- Aircraft
- Heavy Equipment

### Applications

- Bus Operator Protection
- Streetcar Operator Protection
- Aircraft
- Automotive Glazing

### Capabilities

- CNC Machining & Drilling
- Part Stamping
- Finished Edges
- Local Inventory Management
- Finished Parts
- Plasma Coating

**Contact us today! Attn: Shawn Gliptis**  
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 **Piedmont Plastics**<sup>®</sup>  
where solutions take shape

# Data Sheet

Properties	Test Method	Unit	AS2 Polycarbonate
	ASTM		
<b>Physical</b>			
Specific Gravity	D-792	-	1.2
Optical Refractive Index	D-542	-	1.586
Light Transmittance	D-1003	%	86
Rockwell Hardness	D-785	M scale	M70 / R118
Abrasion Resistance	-	-	-
100 cycles/500g Cs-10F wheels	D-1044	% Change	1.33
1000 cycle/500g Cs-10F wheels	D-1044	% Change	1.70
Falling sand (7.5kg)	D-968	% Change	≈ 10 - 12
Water Absorption	D-570	%	0.15
Coefficient-of-friction (Static against sapphire balls)	-	-	≈ 0.3
Water Ab Eraser Abrasion	MIL-C675	Pass/Fail	Pass
<b>Mechanical</b>			
Tensile Strength - Yield	D-638	psi	9,000
Tensile Strength - Elongation	D-638	%	110
Tensile Strength - Modulus	D-638	psi	340,000
Flexural Strength - (Rupture)	D-790	psi	13,500
Flexural Modulus	D-790	psi	345,000
Impact Strength - Izod, Unnotched @ 0.125"	D-256	ft. lbs/in.	60 (no failure)
Impact Strength - Izod, notched @ 0.125"	D-256	ft. lbs/in.	18
<b>Thermal</b>			
Deflection Temp. under load - Heat Distortion Temperature - 66 psi	D-648	deg. F	280
Deflection Temp. under load - Heat Distortion Temperature - 264 psi	D-648	deg. F	270
Coefficient of Thermal Expansion	D-696	in./in./ deg. F	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	Cento-Fitch	BTU/(Hr.)(Sq.Ft.) (deg. F/in.)	1.35
Ignition Temperature	D-1929	deg. F	1,022
Ignition Temperature, Flash	D-1929	deg. F	824
<b>Chemical Resistance</b>			
Isopropanol	Test Condition: Tested after Immersing 24 hours  No Change: + Minor Change: ○ Changed: -		+
Acetone			+
MEK			+
Windex			+
Kerosene			+
Hydraulic fluid			+
De-icing fluid			+
<b>Coating Environmental Durability Temperature / Relative Humidity Dependency</b>			
QUV-A (24 hr at 50°C)	Cycle: 4hr condensation 4hr UVA Exposure	Pass/Fail	Pass

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