



Plexiglas® Arena Plexiglas® Arena AR

CELL CAST ACRYLIC SHEET

Plexiglas® Arena acrylic sheet is designed specifically for indoor arena glazing. It is made via the Plexiglas® cell cast process, which allows for the highest optical properties using state of the art acrylic sheet manufacturing technology. Plexiglas® Arena acrylic sheet does not shatter like glass when broken. It is nearly half the weight of tempered glass, which allows for quicker and easier change outs if needed.

Plexiglas® Arena sheet is available in two thicknesses, full gauge 0.625" for the highest energy impact zone behind the goal area, and full gauge 0.500" for the sides of the arena.

For those 'heavy' usage arenas, an abrasion resistant version – Plexiglas® Arena AR acrylic sheet – is also offered. Plexiglas® Arena AR provides enhanced chemical resistance compared to uncoated sheet, which will allow for easier cleaning and extended service life.

- **Conforms to ASTM F-1703 for Hockey Rink Glazing**
- **Exceptional Optical Clarity**
- **Little to no low angle distortion**
- **Lightweight - Half the weight of glass**
- **Fabricates just like standard cell cast acrylic**

Plexiglas® Arena

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TYPICAL STANDARD PROPERTIES

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL			
Nominal Thickness for data unless otherwise noted		in	0.625"
Specific Gravity	ASTM D-792	—	1.19
Rockwell Hardness	ASTM D-785	M scale	100
OPTICAL			
Refractive Index (ND @ 73°F)	ASTM D-542	—	1.49
Luminous Transmittance ¹	ASTM D-1003	%	92.0
ABRASION RESISTANCE			
Taber Abrasion, Initial Haze	ASTM D-1044	%	< 2.0
Taber Abrasion, Haze After 100 cycles – Plexiglas Arena	ASTM D-1044	%	> 20.0
Taber Abrasion, Haze After 100 cycles – Plexiglas Arena/AR	ASTM D-1044	%	< 4.0
Taber Abrasion, Haze After 500 cycles – Plexiglas Arena	ASTM D-1044	%	> 30.0
Taber Abrasion, Haze After 500 cycles – Plexiglas Arena/AR	ASTM D-1044	%	< 7.0
MECHANICAL			
Tensile Strength, maximum	ASTM D-638	psi	10,500
Tensile Strength, yield	ASTM D-638	psi	10,500
Tensile Elongation	ASTM D-638	%	4.9
Tensile Modulus of Elasticity	ASTM D-638	psi	450,000
Flexural Strength, maximum	ASTM D-790	psi	16,000
Flexural Modulus of Elasticity	ASTM D-790	psi	450,000
Compressive Strength, maximum	ASTM D-695	psi	18,000
Compressive Modulus	ASTM D-695	psi	450,000
Notched Izod impact @ 73°F (23°C)	ASTM D-256	ft-lb / in	0.3
Un-notched Charpy @ 73°F (23°C)	ASTM D-256	ft-lb / 0.5" x 1" section	7.0
THERMAL			
Deflection Temperature under Flexural Load @ 264psi – unannealed ^{1,2}	ASTM D-648	°F	205
Coefficient of Thermal Expansion at 60°F	ASTM E-831	in / in / °F x 10 ⁵	3.9
Maximum Recommended Continuous Service Temperature	N/A	°F	180 – 200
CRAZE RESISTANCE			
Constant Stress Craze Resistance, IPA ⁴	Modified ARTC Method – Mil P-6997	psi	2,100
Constant Stress Craze Resistance, Aromatic / Alcohol Blend ⁴	Modified ARTC Method – Mil P-6997	psi	1,700
FLAMMABILITY³ & SPECIFICATION COMPLIANCE			
Self Ignition Temperature	ASTM D-1929	°F	860
Standard Specification for PMMA Acrylic Plastic Sheet – Plexiglas Arena	ASTM D-4802	—	Category A-1, Finish 1
Standard Specification for PMMA Acrylic Plastic Sheet – Plexiglas Arena AR	ASTM D-4602	—	Category A-1, Finish 3
Standard Guide for Ice Hockey Playing Facilities	ASTM F-1703	—	PASS (0.500" & 0.625")

Data given are average values and should not be used for specification purposes.

1. This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted

2. Tests performed on 0.236" thickness.

3. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.

4. The values are after the material has been heated for forming.

STANDARD PRODUCT OFFERING*

SHEET SIZE
48" x 96"
60" x 96"
72" x 96"

THICKNESS
0.500"
0.625"

*Offered in colorless sheet only

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Plexiglas® acrylic plastic is a combustible thermoplastic. Observe fire precautions appropriate for comparable forms of wood and paper. For building uses, check code approvals. Impact resistance is a factor of thickness. Avoid exposure to heat or aromatic solvents. Clean with soap and water. Avoid abrasives.

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