

# Aqua-Steel®



Aqua-Steel® was formulated to be used where safety and mission critical backer plate applications require maximum holding power. This material is extremely strong and easy to process. Aqua-Steel® can be drilled and tapped when challenged with critical blind fasteners.

## Mechanical Strength Test Properties

	¼ inch	⅜ inch	½ inch	¾ inch
Flexural Strength ASTM D-790				
MD (psi)	20,000	20,000	20,000	20,000
CD (psi)	16,000	16,000	16,000	16,000
Flexural Modulus ASTM D-790				
MD (psi)	2.0 x 10 <sup>6</sup>	2.0 x 10 <sup>6</sup>	2.0 x 10 <sup>6</sup>	2.0 x 10 <sup>6</sup>
CD (psi)	1.5 x 10 <sup>6</sup>	1.5 x 10 <sup>6</sup>	1.5 x 10 <sup>6</sup>	1.5 x 10 <sup>6</sup>
Tensile Modulus ASTM D-638				
MD (psi)	18,000	18,000	18,000	18,000
CD (psi)	13,000	13,000	13,000	13,000

## Fire Test Data

	Product Type	
	Class A	Class B
Thickness	0.250"	0.250"
Flame Spread Index - ASTM E-84 (BLDG)	5	30
Smoke Developed Values - ASTM E-84 (BLDG)	10	105
Fire Rating	A	B*

\*Standard Product is Class B



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## Physical and Performance Test Values

Property	Test	NEMA Min	¼ inch	⅜ inch	½ inch	¾ inch
Thickness			¼ inch	⅜ inch	½ inch	¾ inch
Resistance to Boiling Water	3.5	No Effect	No Effect	No Effect	No Effect	No Effect
Resistance to High Temperature	3.6	Slight Effect	No Effect	No Effect	No Effect	No Effect
Ball Impact Resistance: Inches Drop	3.8	75"	96"+	96"+	96"+	96"+
Dimensional Change: Length (Machine Direction) Width (Cross Direction)	3.11	0.3% Max 0.7% Max	0.25% 0.50%	0.25% 0.50%	0.25% 0.50%	0.25% 0.50%
Weight Per Unit Area Lbs/ft <sup>2</sup> Kg/m <sup>2</sup>			1.71 8.35	2.57 12.53	3.42 16.7	5.13 25.05
Density			1.3 - 1.45	1.3 - 1.45	1.3 - 1.45	1.3 - 1.45

### General Manufacturing Tolerances

Thickness (.156 to .375)	+/- .020
Thickness (above .375 to 1.000)	+/- .030
CNC Shaped Size (Length - Width)	+/- .020
Drill Diameter	+/- .003
Drill Depth	+/- .020
CNC Hole to Hole	+/- .020
CNC Hole to Edge (1 Oper)	+/- .020
CNC Hole to Edge (2 Oper)	+/- .030
Routing - (Slots Width and Length)	+/- .015
Routing - (Slots Depth)	+/- .020

### Fastening Point Applications

- Bow Rails
- Swim Platforms
- Bow Eyes
- Trolling Motors
- Hard Tops
- T-Tops
- Blind Fasteners
- Engine Blocks
- Seat Mounts
- Cleats

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