

# Semitron® PP

## Polypropylene Created Specifically for the Semiconductor Industry

Semitron® PP is polypropylene plate developed specifically for demanding Wet Process Semiconductor applications that requires a high level of dimensional stability.



### Minimal Center Line Porosity

- We have developed proprietary processing methods to minimize the high stress & center line porosity that is common with standard polypropylene
- The plates, ranging from 2" to 5" thickness are manufactured to the highest standards for use in the Semiconductor Wet Process industry

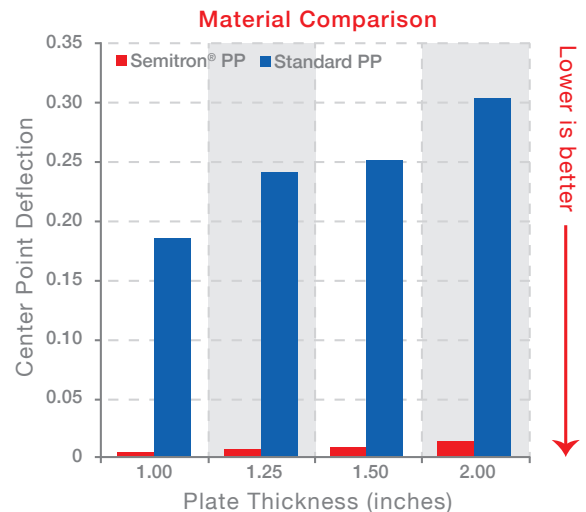
### Sizes Available

	Thickness	Plate Size (mm.)	
Semitron® PP	2.0in/50.8mm	610 x 1220	1220 x 3050
	2.25in/57.15mm	610 x 1220	1220 x 3050
	2.5in/63.5mm	610 x 1220	1220 x 3050
	3.0in/76.2mm	610 x 1220	1220 x 3050
	4.0in/101.6mm	610 x 1220	1220 x 3050
	5.0in/127mm	610 x 1220	1220 x 3050

**Semitron® PP:** Proprietary formulated thick plate PP that delivers low stress, low centerline porosity and ultra clean for demanding wet process applications

### Key Benefits

- Minimizes center line porosity common with thicker plates (2" & up)
- Delivers Ultra-Clean plate to minimize risk of surface contaminants
- Lowers overall cost by delivering lower stress plate



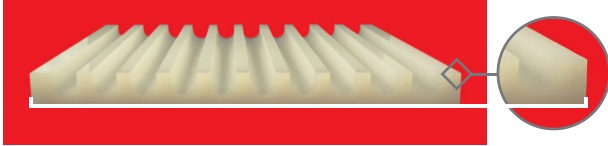
\*Data Source Mitsubishi Chemical Advanced Materials Lab



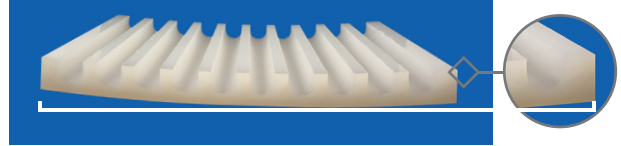
# Semitron® PP vs Standard PP

Lower Internal Stress allows for accelerated fabrication cycles through faster speeds & feeds as well as reducing or eliminating the need to anneal.

Semitron® PP Plate



Standard PP Plate



## Data Sheet

	Property	Average Value – Metric	Average Value – Imperial
Physical Properties	Specific Gravity	0.91 g/cc	0.91
	Water Absorption at Saturation	<= 0.010%	<= 0.010%
Mechanical Properties	Hardness, Shore D	78	78
	Tensile Strength	33.1 MPa	4,800 psi
	Elongation at Break	25%	25%
	Tensile Modulus @ Temperature 22.8°C (73.0°F)	2.07 GPa	300 ksi
	Flexural Strength	41.4 MPa	6,000 psi
	Flexural Modulus	1.72 GPa	250 ksi
	Compressive Strength	48.3 MPa	7,000 psi
	Compressive Modulus	1.31 GPa	190 ksi
	Izod Impact, Notched	0.641 J/cm	1.20 ft-lb/in
Thermal Properties	Melting Point	162 °C	324 °F
	Maximum Service Temperature, Air	82.2 °C	180 °F
	Deflection Temperature at 0.46 MPa (66 psi)	104 °C	220 °F
	Deflection Temperature at 1.8 MPa (264 psi)	82.2 °C	180 °F
	Flammability, UL94	HB	HB

(1) Data represents Mitsubishi Chemical Advanced Materials estimated maximum long-term service temperature based on practical field experience.

(2) Specimens: 1/8" thick x 2" diameter or square.

(3) Estimated rating based on available data. The UL-94 Test is a laboratory test and does not relate to actual fire hazard.

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