



## STAT-PRO® 500 CONDUCTIVE POLYCARBONATE MATERIAL

Typical properties

STAT-PRO® 500 is recommended for thin film/MR head applications requiring both static protection and a high degree of dimensional stability, such as seen in pick and place processes. It is generally compatible with weak acids, bases, oils and alcohol at room temperature.

Property		Test Method	Value	Units
<b>PHYSICAL</b>				
Specific gravity		ASTM D-792	1.25	–
Flammability		UL94	HB	–
<b>ELECTRICAL</b>				
Volume resistivity		ASTM D-257	10 <sup>3</sup> –10 <sup>5</sup>	ohms-cm
Surface resistivity		ASTM D-257	10 <sup>3</sup> –10 <sup>5</sup>	ohms/sq
Static decay		FTMS 4046	<0.01	sec
<b>MECHANICAL</b>				
Notched Izod impact		ASTM D-256	1.2	ft-lbs/in
Unnotched impact		ASTM D-256	4.2	ft-lbs/in
Tensile strength		ASTM D-638	9,100	PSI
Tensile modulus		ASTM D-790	450,000	PSI
Tensile elongation		ASTM D-638	11	%
Flexural strength		ASTM D-790	13,400	PSI
Flexural modulus		ASTM D-790	450,000	PSI
<b>THERMAL</b>				
Continuous use temperature limit		–	100	°C
Heat deflection temperature	@264 PSI	ASTM D-648	135	°C
	@66 PSI	ASTM D-648	145	°C
Tg		ASTM D-3418	150–160	°C
Tm		ASTM D-3418	NA	°C
<b>CLEANLINESS</b>				
Particulation*	Weight loss	ASTM D-1044	0.043	grams
	Volume loss	ASTM D-1044	0.034	cm <sup>3</sup>
Outgassing	%TML at 70°C	ASTM F-1227	0.110	%
	%TML at 125°C	ASTM F-1227	0.146	%

\*1,000 cycles with the 10 calibre wheel and 1,000 grams force applied

### Chemical Compatibility Key

#### + Resistant

- No change in surface appearance
- <2% weight change
- <10% change in physical properties

#### 0 Limited Resistance

- No change in surface appearance
- 2–4% weight change
- 10–20% change in physical properties

#### – Not Resistant

- Change in surface appearance
- >4% weight change
- >20% change in physical properties

**CLEANLINESS (CONTINUED)**

Extractables	Fluoride	Chloride	Nitrate	Phosphate	Sulfate
±(ppm)	<0.01	0.05	0.08	<0.05	<0.05

±Sample 51 mm (2.0") square extracted in 10 ml of DI water for two hours at 85°C (185°F)

Chemical Compatibility	Concentration	Value (Room Temp.)
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**ACIDS**

Acetic (glacial)	100%	No data
	10%	+
Aqua regia	—	No data
Chromic	40%	No data
Hydrochloric	37%	No data
	10%	+
Hydrofluoric	49%	No data
	10%	+
Nitric	70%	0
	40%	No data
	10%	+
Nitric (fuming)	—	No data
Phosphoric	85%	+
	50%	+
Sulfuric	98%	No data
	60%	No data
	10%	+

**BASES**

Ammonium hydroxide	62%	No data
	10%	—
Hydrogen peroxide	30%	+
Sodium hydroxide	Concentrated	—
	50%	—
Potassium hydroxide	50%	—

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Chemical Compatibility	Concentration	Value (Room Temp.)
<b>SOLVENTS</b>		
Acetone	100%	-
Benzaldehyde	100%	-
Carbon tetrachloride	100%	-
Diethyl ether	100%	No data
Ethyl acetate	100%	-
Ethyl alcohol	100%	+
Ethylene glycol	100%	+
Heptane	100%	+
Hexane	100%	+
HMDS	100%	No data
Isopropyl alcohol	100%	+
Methyl alcohol	100%	+
NMP	100%	No data
Posistrip 830	100%	No data
TMAH	100%	No data
Toluene	100%	-
1,2,4 Trichlorobenzene	100%	No data
Trichloroethane	100%	-
Trichloroethylene	100%	No data
Xylene	100%	-

This information is based on our experience to date and we believe it to be reliable. Data is obtained from specimens molded under controlled conditions from representative samples of the compound described. Properties may be affected by the molding techniques and by the size and shape of the item molded. Identical results cannot be guaranteed and no assurance can be implied that all molded articles have the same properties as those listed.

<i>Chemical Compatibility Key</i>		
<b>+ Resistant</b> <ul style="list-style-type: none"> <li>No change in surface appearance</li> <li>&lt;2% weight change</li> <li>&lt;10% change in physical properties</li> </ul>	<b>0 Limited Resistance</b> <ul style="list-style-type: none"> <li>No change in surface appearance</li> <li>2–4% weight change</li> <li>10–20% change in physical properties</li> </ul>	<b>- Not Resistant</b> <ul style="list-style-type: none"> <li>Change in surface appearance</li> <li>&gt;4% weight change</li> <li>&gt;20% change in physical properties</li> </ul>

## For More Information

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*The materials integrity management company*

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