



STAT-PRO® 825 MATERIAL

Typical Properties

April 2003

STAT-PRO® 825 material is recommended for thin film/MR head applications requiring static protection, dimensional stability and a colored background. It has excellent long-term resistance to creep at high temperatures and stresses, and has good resistance to most oils, alcohols, dilute mineral acids, dilute bases and salt solutions.

Property	Test Method	Value	Units
Physical			
Specific gravity	ASTM D-792	1.41	----
Flammability	UL94	HB	----
Electrical			
Volume resistivity	ASTM D-257	$10^2 - 10^4$	ohms-cm
Surface resistivity	ASTM D-257	$10^3 - 10^6$	ohms/sq
Static Decay	FTMS 4046	<0.1	sec
Mechanical			
Notched Izod impact	ASTM D-256	0.7	ft-lbs/in
Unnotched impact	ASTM D-256	12	ft-lbs/in
Tensile strength	ASTM D-638	16,000	PSI
Tensile modulus	ASTM D-790	560,000	PSI
Tensile elongation	ASTM D-638	7	%
Flexural strength	ASTM D-790	22,000	PSI
Flexural modulus	ASTM D-790	590,000	PSI
Thermal			
Continuous use temperature limit	----	170	°C
Heat deflection temp.			
@264 PSI	ASTM D-648	210	°C
@66 PSI	ASTM D-648	213	°C
Tg	ASTM D-3418	220	°C
Tm	ASTM D-3418	NA	°C

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ENTEGRIS, INC.

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Cleanliness			
<i>Particulation*</i>			
Weight loss	ASTM D-1044	0.010	grams
Volume loss	ASTM D-1044	0.007	cm ³
<i>Outgassing</i>			
%TML at 70°C	ASTM F-1227	No data	%
%TML at 125°C	ASTM F-1227	No data	%

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

<i>Extractables± (PPM)</i>				
Fluoride	Chloride	Nitrate	Phosphate	Sulfate
<0.01	0.25	<0.03	<0.05	0.70

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

Chemical Compatibility (Acids)		
<i>Chemical</i>	<i>Concentration</i>	<i>Value (room temp.)</i>
Acetic (glacial)	100%	No data
	10%	+
Aqua regia	----	No data
Chromic	40%	0
Hydrochloric	37%	No data
	10%	+
Hydrofluoric	49%	No data
	10%	No data
Nitric	70%	No data
	40%	No data
	10%	-
Nitric (fuming)	----	No data
Phosphoric	85%	No data
	50%	No data
Sulfuric	98%	No data
	60%	No data
	10%	-
Chemical Compatibility (Bases)		
<i>Chemical</i>	<i>Concentration</i>	<i>Value (room temp.)</i>
Ammonium hydroxide	62%	-
	10%	-
Hydrogen peroxide	30%	No data
Sodium hydroxide	Conc.	No data
	50%	No data
Potassium hydroxide	50%	No data

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Chemical Compatibility (Solvents)		
<i>Chemical</i>	<i>Concentration</i>	<i>Value (room temp.)</i>
Acetone	100%	+
Benzaldehyde	100%	No data
Carbon tetrachloride	100%	+
Diethyl ether	100%	No data
Ethyl acetate	100%	+
Ethyl alcohol	100%	+
Ethylene glycol	100%	+
Heptane	100%	No data
Hexane	100%	+
HMDS	100%	No data
Isopropyl alcohol	100%	+
Methyl alcohol	100%	0
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%	+

Key to Chemical Compatibility
+ Resistant <ul style="list-style-type: none"> No change in surface appearance Less than a 2% weight change Less than a 10% change in physical properties
0 Limited Resistance <ul style="list-style-type: none"> No change in surface appearance 2-4% weight change 10-20% change in physical properties
- Not Resistant <ul style="list-style-type: none"> Change in surface appearance Greater than a 4% weight change Greater than a 20% change in physical properties

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.

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